A STUDY TO ASSESS THE EFFECT OF LAUGHTER THERAPY ON QUALITY OF SLEEP AND BLOOD PRESSURE AMONG ADULT PEOPLE RESIDING IN SELECTED AREA AT TIRUPUR DISTRICT

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CERTIFICATE

This is to certify that the dissertation titled **"A Study to assess the effect of laughter therapy on quality of sleep and blood pressure among adult people residing in selected area at tirupur "** is the bonafide work done by **Ms.G.A.Divya,** R.V.S College of Nursing, R.V.S Educational Trust, Sulur, Coimbatore, submitted to The Tamil Nadu Dr. M.G.R Medical University, Chennai-32, in partial fulfillment of the requirement for the award of the degree of M.Sc (Nursing) Branch I-Medical and surgical Nursing under our guidance and supervision during the academic period from 2013-2015.

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ABSTRACT

A Study to assess the effect of laughter therapy on Quality of Sleep and Blood Pressure among Adult people residing in Selected area at tirupur.

The main aim of the study was to determine whether laughter therapy makes a significant difference in blood pressure and sleep among hypertensive patients in comparison with the non receivers of laughter therapy.

The study was conducted in community area (kodangipalayam) at Tirupur District. Repeated measures pretest and post test group design was used to determine the effectiveness of laughter therapy on hypertensive clients. The sample consisted of 30 subjects in experimental group and 25 subjects in control group selected by purposive sampling method from different areas of the community.

All subjects in the experimental group were taught laughter therapy in one session for 30 minutes followed by daily practice of laughter therapy every day for 20 minutes for a Period of 28 days in the presence of the investigator. On the first day before intervention and on the 7^{th} ,14^{th} ,21^{st} ,and 28^{th} days after intervention both the groups were assessed for their systolic and diastolic blood pressure measures by using a calibrated sphygmomanometer and sleep was rated by the modified Pittsburgh sleep scale.

The result showed the significant reduction in systolic and the diastolic blood pressure in the experimental group(pre M=160 and post M=132)(t=2.04,df=28,p=0.05%) and diastolic blood pressure(pre M=93.67 and post M=80.67)(t=2.04,df28,p=0.05%) after intervention .The mean systolic and diastolic blood ressure in the control group remained the same in the subsequent baseline assessments.

The mean sleep score of the experimental and group was (pre 15.57) and (post M=3.90) showed a significant difference (t=2.04,df=28,p=0.05%) after intervention which was significant at 0.05 level . The mean score of the control group remained the same in the pre and post assessment.

The study concluded that laughter therapy is a cost effective nursing intervention to reduce blood pressure and improve the quality of sleep.

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CHAPTER 1

INTRODUCTION

BACKGROUND OF THE STUDY:

Health being a state of complete physical, mental, social well being and not merely the absence of disease or infirmity, there are wide statuses for health that prevails worldwide. High blood pressure is a major public health problem in India and its prevalence is rapidly increasing among urban and rural populations. Reduced systolic and diastolic blood pressure can decrease cardiovascular risk and this can be achieved by pharmacological and non pharmacological means.

According to Global Health Observatory Data 2015 Worldwide, raised blood pressure is estimated to cause 7.5 million deaths, about, 12.8% of the total of all deaths. Raised blood pressure is a major risk factor for coronary and ischemic heart disease as well as hemorrhagic stroke. Blood pressure levels have been shown to be continuously related to risk for stroke.

Hypertension is the contributing factor for cardiovascular disease. **WHO** report (2002) showed that India may contribute for a largest cardiovascular disease burden worldwide by the year 2020.

According to a systematic review and meta analysis conducted by Regupathi Angella on prevalence of hypertension in India (2013) it was found that the overall prevalence of hypertension India's were about 33% in Urban and 25% in rural. Among them 25% rural and 38% Indian's were being treated for hypertension. One tenth or rural one fifth of urban Indian hypertension populate have their BP under control. This shift in epidemiological profile presents a unique challenge to India's health system as rates of cardiovascular and metabolic disease like hypertension, diabetes, obesity and cancer rise, tuberculosis, diarrheal disease and water borne illnesses remain widespread. According to a 2012 World Health Organization report, noncommunicable diseases were responsible for two-thirds of the total morbidity burden and about 53% of total deaths in India.

A study was conducted by **Mr.Shema Subramanian M. Nalasoundarssane** and, **LG Saptharishi** on Non pharmacological interventions in hypertension which

was a community based study in 2007. It included subjects in prehypertensive and hypertensive young adults who were given non pharmacological intervention like diet, exercise and others in three interventional group. It was found that there was significant reduction in blood pressure in experimental group than the control group.

In an ambulatory blood pressure study conducted on sleep and hypertension by **David A Calhoun, MD** and **Suzan M, Harding**, **MD FCCP It In American College of Chest Physicians 2010** it was identified that even a small increase in blood pressure particularly at night time are associated with significant increase in cardiovascular morbidity and mortality. Accordingly sleep related diseases that may induce increased BP would be anticipated to substantially affect cardiovascular risk. In a sleep heart health study it was found that subjects sleeping ≤ 5hrnight had a higher frequency of prevalent hypertension than subject who sleep for ≥5 hr/night.

In an urban study in India conducted by **Shyamal Kumar Das And Kalyan Sanyal** on prevalence of hypertension(2005) it was shown that the prevalence of hypertension has increased by 30 times among the urban population over a period of 55 years and about 10 times among the rural population over a period of 36 years . Excess competition in academic field is one of the stresses for the younger people in India and also unemployment. Number of studies have already explained that the relationship between blood pressure and risk of heart disease .Pre hypertensive have more chance to go into stages of hypertension. Hence it is also possible that the young stressed people with prehypertensive level of blood pressures may be at risk to develop heart diseases.

This study emphasized on two needs such as sleep and control of Blood pressure. Adequate sleep is an essential need for human beings. The human organisms needs rest and sleep to conserve energy and well being, prevent fatigue, provide organ to respite and relieve tension. Sleep deprivation results in a decreased body temperature and a decrease in immune system function.

If sleep continues for a longer time it increases the risk of more serious health problems such as weakened immune system, diabetes mellitus, depression, high blood pressure and obesity. There are home remedial measures to improve sleep such as using comfort device, consuming warm milk, reading story book and by providing good ventilation.

Non pharmacological interventions to lower blood pressure

There is growing evidence that non pharmacological interventions lower high blood pressure. These interventions are not costly and are generally beneficial in promoting good health. They also help in reducing the cardiovascular risk factors with a little cost **(Joyce M .Black).**

(Indian Medical Association 2001) Antihypertensive drugs have important role, but focus may be directed towards some lifestyle changes. "Dietary modifications, physical activities may influence the blood pressure. Body weight reduction, less alcohol intake, restriction of salt and also potassium, calcium supplementation can improve the process of lowering blood pressure. Fiber rich diet and low sodium could reduce the blood pressure by about 5mm of Hg among hypertension clients. Relaxation exercises, relaxation therapies like yoga, etc, have beneficial effects on hypertension clients. The effect of lifestyle modifications may prevent a need of drug management for hypertension in the initial stage for this all hypertensive clients should be tried initially one or more of the lifestyle changes

Guptha 1997 recommends progressive relaxation; deep breathing exercise and yoga may reduce the blood pressure.

In a study conducted by **TK Liqman-Arafath and Surya Prakash Bhatt ron 2007** on Non-pharmacological management of hypertension it was showed that the, laughing combined with meditation, less consumption of alcohol, reduced the intake of sodium and the dietary changes lower the hypertension rate.

Many literatures reveal that laughter therapy helps in reducing the blood pressure. Laughter therapy promises a useful approach to treatment of hypertension. Systematic teachings of laughter therapy exert a positive influence on a client with hypertension in reducing the blood pressure.

Benefits of laughter therapy

Laughter therapy is an excellent type of exercise. The laughter therapy has three types. In the first type one laughs freely and loudly with open mouth, in the second type, one laughs without any sound with closed mouth and in the third type, one pours out loud outburst of laughter through the throat like neighing of horse.

A number of research studies revealed that laughter has many health benefits. During the 13th century surgeons used humour to distract the patients from pain alone. Later in the 20th century, came the scientific study of the effect of laughter on overall health.

According to **Kay Herth (1984)** laughter has a built in balancing mechanism that encourages two step action of stimulation and relaxation due to release of chemical adrenaline and nor adrenaline. This reduces anxiety, tension and depression. Thus it helps in mitigating several serious diseases such as hypertension, heart disease. Diabetes, anxiety, insomnia etc.

Fry states that laughter is a good aerobic exercise. He says that 100 laugh a day is equal to 10 minutes rowing or jogging.

Berk *et al.,* (1997) reported prolonged stress creates unhealthy physiological changes and stress causes the adrenal glands to release corticosteroids and stress hormone changes during mirthful laughter.

Cogn *et al.,* (Journal of behavior medicine (1997) has reported the ability of laughter to release muscle tension and helps to release neuropeptides which are body's natural pain suppressing agents.

Thus laughter has multi prolonged approach for the relief of pain, in painful conditions such as spondilitis, arthritis etc.

Lloyd (1990) showed that laughter is a combination of deep inhalation and full exhalation inspiring excellent ventilation and wonderful rest. Thus laughter increases lung capacity and oxygenation. This would benefit patients with lung diseases such as bronchitis and bronchial asthma.

NEED FOR THE STUDY

One of the major socio psychological problems associated with young adults in the society is the stress and strain in work family and peers.

The high prevalence of hypertension in the urban and rural population in India presents a formidable challenge to the Indian health system. In countries like India, the out-of-pocket expenditures incurred for non-communicable diseases (NCDs) like

hypertension are high, which hits the impoverished households the most. Medicines for these chronic diseases account for a large portion of expenditure. Therefore, population based prevention strategies have a high impact and are cost-effective as these target lifestyle change. Interventions utilizing the power of public policies for reducing salt, fat, sugar and alcohol intake through regulatory and consumer education approaches; increasing physical activity through sound urban planning and creation of activity-promoting environments; increasing fruit and vegetable intake through appropriate agricultural and pricing mechanisms; and implementing comprehensive tobacco control have the potential to prevent a large proportion of disease events in the whole population.

According to Indian Express Bureau (2004) one in every 10 Indian's suffer from high blood pressure. Though antihypertensive drugs are available to control blood pressure these drugs have their own side effects and are expensive. Non compliance to medication is very common among hypertensive patients due to various reasons. Antihypertensive medications alone cannot control blood pressure. Physiological relaxation is very important for maintaining blood pressure.

Insomnia is defined as taking more than 30 minutes to get to sleep, waking for a period of 30 minutes or waking earlier than desired within feeling of fatigue and drowsiness during the day, recurring over at least a thirty day period. [Lacks, 1987].

More than 50% of the adults have insomnia as it is typically understood and non pharmacological interventions are under used in the health care practice.

People from all age groups with chronic sleep difficulty show poorer attention, slower response times, Problems with short-term memory, and decreased performance levels. However, insomnia is especially problematic in adults as it puts them at greater risk for, cognitive impairment, poor physical functioning stress, Insomnia is most often co-morbid with medical or psychiatric illnesses, medication use, circadian rhythm changes, and other sleep disorders.

A study conducted by **Lusardi P *et al.,*** on effects of insufficient blood pressure in hypertensive patient it was found that the lack of patients may increase sympathetic nervous activity during the night and the following morning leading to increase blood pressure and heartrate. These situation might represent and increased risk for both target organ and acute cardiovascular diseases.

The researcher during her clinical postings and various field visits in communities found out that most of the adult people have sleep problem, feeling of stress and emotional disturbances. They are much worried about their problems. The investigator observed that most of the hypertensive patients are admitted with complaints like cerebrovascular accident or myocardial infarction and having minor complaints like sleep disturbances. It was also observed that most of them had inadequate knowledge regarding the risk factors of hypertension and its related complications. However now a days there is a greater emphasis on alternative therapies like exercise, yoga that has been incorporated as a measure in the therapeutic and maintenance programme in controlling the complications.

It is a must to find a remedy for the young adult population to have a good relief from the health problems such as hypertension and sleep disturbances apart from the medical remedies for the community living young adults.

Hence the investigator is interested to assess the effect of laughter therapy on the quality of sleep and blood pressure in young adults staying in selected communities.

STATEMENT OF THE PROBLEM

A study to assess the effect of laughter therapy on quality of sleep and blood pressure among adults residing in selected area at Tirupur district.

AIM OF THE STUDY

The main aim of the study is to determine whether laughter therapy makes a significant difference in blood pressure and sleep among hypertensive patients in comparison with the non receivers of laughter therapy.

SPECIFIC OBJECTIVES:

- To determine the level of blood pressure in experimental and control group before and after laughter therapy.
- To determine the quality of sleep reported by the samples in the experimental and control group before and after laughter therapy.
- To determine the association of blood pressure and sleep with selected demographic variables.

HYPOTHESIS:

H1: There will be a significant difference in mean systolic blood pressure of experimental and control group before and after intervention.

H2: There will be a significant difference in mean diastolic blood pressure of experimental and control group before and after intervention.

H3: There will be significant difference in mean sleep score between experimental and control group after intervention.

OPERATIONAL DEFINITIONS:

Effects

Effects refers to the expected outcome which is a decreased in systolic and diastolic blood pressure and increase in quality of sleep as a result of laughter therapy.

Adults

In this study adults referred to persons who are fully grown within the age limit of 35 – 60 years.

Laughter therapy:

The laughter is an excellent type of exercise which control blood pressure by reducing the release of stress related hormones and brings about relaxation.

In this study, it refers to a form of therapy in which the patient performs various steps of laughing exercise as per the instruction given in order to achieve full relaxation of the body and mind

Blood pressure:

It refers to the pressure exerted by the blood against the arterial walls of the body. The blood pressure is measured by using a calibrated sphygmomanometer and is expressed in mm of Hg.

Systolic blood pressure:

It is the highest degree of blood pressure exerted by the blood against the walls of the blood vessels during the ventricular contraction when the left ventricles id forcing blood into the aorta.

Diastolic blood pressure:

It is the lowest pressure that occurs when the heart is in its resting period just before the contraction of the left ventricles, the 2^{nd} sound being the diastolic blood pressure.

Hypertension:

It is defined as persistent elevation of the systolic blood pressure and diastolic blood pressure from the normal level. Normal blood pressure:120/80 mm of Hg. The stages of hypertension in the study are stated as follows

STAGES OF HYPERTENSION

PRE HYPERTENSION	STAGE I HYPERTENSION	STAGE II HYPERTENSION
139 mm of Hg	159 mm of' Hg	>160mmof Hg
80-89mm of Hg	90-99 mm of Hg	>100mmof Hg

QUALITY OF SLEEP:

Sleep is a state of rest in which the nervous system is inactive, the eyes are closed, the muscles are relaxed and the mind in unconscious. The characteristics of sleep can be verbalized by the person who experiences the sleep. In this study the self report of sleep is measured on a Pitts burgh sleep scale.

ASSUMPTION:

- Adult population are at a great risk of getting in to hypertension due to life style and stress. Adulthood is accompanied with alteration in normal biological, psychological and sociological functions due to life style modifications.
- Sleep is a biological necessity of rest, restoration, and recreation of the body.
- Sleep disturbance is very common in adults and it varies from person to person.
- Sleep pattern can be improved by various measures.

SCOPE OF THE STUDY:

The level of blood pressure and sleep are measured for the adults who are hypertensive before and after the intervention. If there is clear reduction in the blood pressure and improvement in quality of sleep in the experimental group it indicates the effectiveness of laughter therapy. If the adults are able to perform it without any difficulties it can be taken into account as cost effective and easy method to be adapted by adults with hypertension and sleep disturbances. The findings may be

helpful for the health practice to motivate the hypertensive adults on hypertensive drugs to practice laughter therapy to maintain their blood pressure in the normal level.

CONCEPTUAL FRAMEWORK:

A Conceptual model can be defined as the set of concepts and those assumptions that integrate them in to a meaningful configuration.[Fewett, 1980]

The development of a concept model is a fundamental process required before conducting actual research. The frame work influences each step of the research process. The conceptual frame work in nursing research helps you to provide clear concise idea of knowledge in the areas for patients.

The conceptual frame work used in this study is based on **Dorothy's *et al.,* (1980)** Behavior model.

In this study modified **Johnson E Dorothy's (1980)** Behavior model is adopted.

ASSESSMENT

Assessment is the process of collecting data regarding each subsystem. Data on demographic profile (age, education, occupation, income, food and exercise habits, history of antihypertensive medication) was collected.

DIAGNOSIS

Through assessment from the subsystem problems are identified and diagnosis is made and it provides basis for nursing intervention in this study the data collected through observation of blood pressure and using interview schedule. The diagnosis is made and categorized into prehypertension, stage I hypertension and stage II hypertension.

NURSING GOALS

After diagnosis the goal was to maintain or restore the persons behavior system balance, and stability through planning interventions. This studies goals is to reduce blood pressure and to promote sleep.

INTERVENTION

Nursing activity is an external regulatory force that assist the person to regain equilibrium in this study the nursing activity is to teach the laughter therapy techniques to the experimental group for a period of time to bring change in the blood pressure and sleep.

EVALUATION

Evaluation refers to checking the subsystem identified as problematic for balance and overall system stability. In this study the investigator compared the experimental group with the control group by using the observation of blood pressure and self report quality of sleep given by sample.

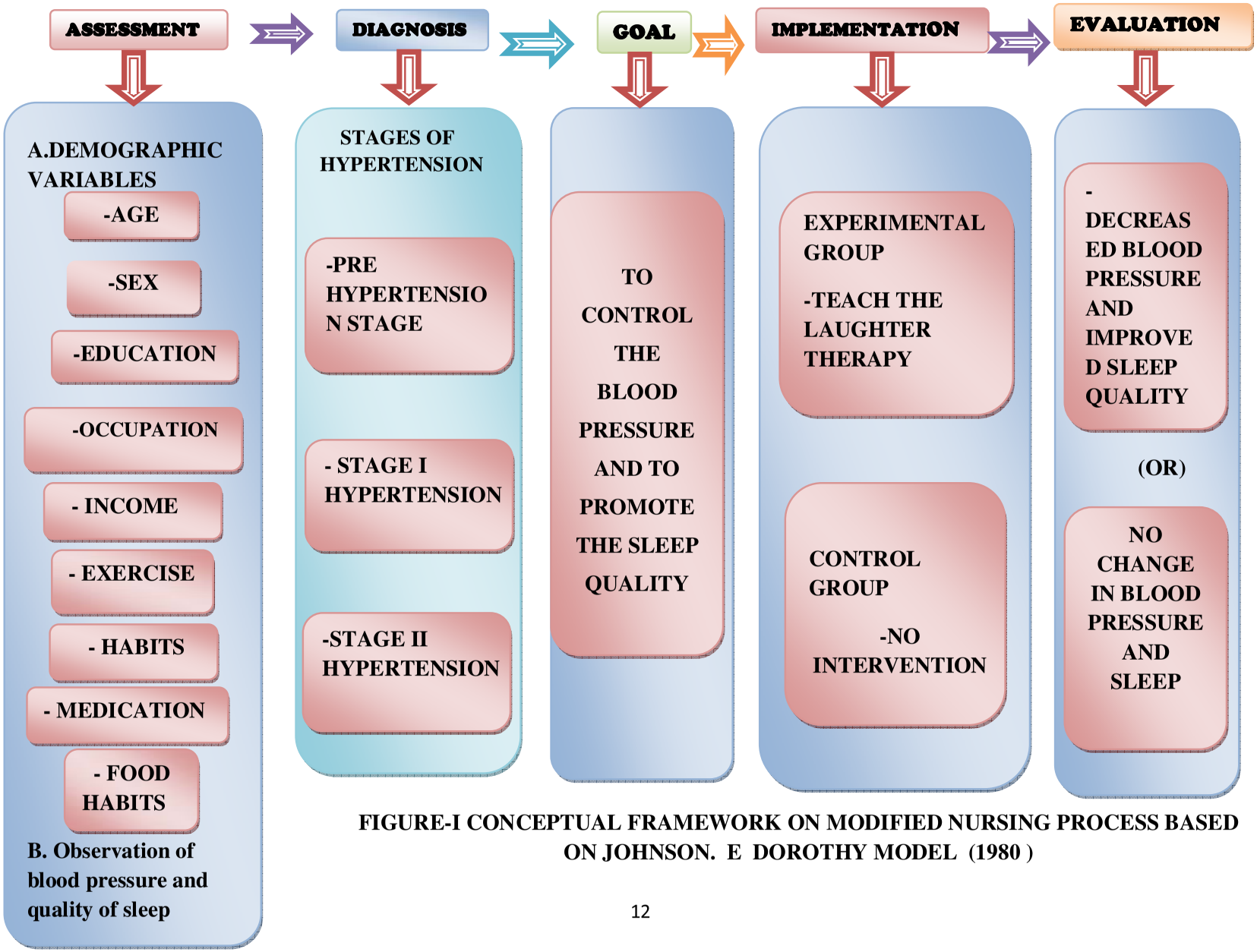

FIGURE-I CONCEPTUAL FRAMEWORK ON MODIFIED NURSING PROCESS BASED ON JOHNSON. E DOROTHY MODEL (1980)

CHAPTER - II

REVIEW OF LITERATURE

According to Hulme and groves (1994) review of literature is a systematic identification, location, scrutiny of written materials that contains information on research problems. The review of literature in a research report is a summary of current knowledge about a particular problem and practice includes what is known and not known about the problem.

The researcher came across numerous theoretical and empherical literature related to topic under study. The relevant and related literature that was found useful have been presented as follows.

LITERATURE RELATED TO LAUGHTER THERAPY:

1. Literature related to prevalence of hypertension.
2. Literature related to Non pharmacological interventions to reduce blood pressure.
3. Literature related to Non pharmacological interventions to promote sleep.
4. Literature related to relationship between sleep and blood pressure.

Literature related to prevalence of hypertension

Shanthi Rani, and Pradeepa (2003) conducted a study on prevalence of risk factor s of hypertension in a selected south Indian population in Chennai. The aim of the study was to determine the prevalence of hypertension and the risk factors for hypertension. ECG analysis and blood pressure assessment were performed for 1175 clients and it was found that the prevalence of hypertension was high among adults in urban population in south India and this calls for the urgent prevention and control og hypertension.

Shyamal Kumar das et al. (2005) conducted a study on survey of urban community in India in which the growing trends of high prevalence of hypertension in a developing country was studied. The study was conducted in Kolkata. The aim of the study was to identify the risk factors and the prevalence of hypertension. The result

showed an age and sex specific prevalence of hypertension that showed progressive raise of hypertension in women than men. Prevalence of hypertension was high in young adults particularly students and labours

Hether M Johnson conducted a comparative study to compare the rates of newly diagnosed hypertensive patients prevalence for different age group and identify predictors of delays in the initial diagnosis among young adults who regularly use primary care. The researcher did a retrospective analysis for this study among 14970 patients. The age limit of the clients were 18 – 39 years (2008-2011). The study concluded that providers and patients actors are critical determiners of poor hypertension diagnosis great among young adults with regular primary care use.

Rejina C Grebla conducted a study on prevalence of determinants and isolated systolic hypertension among young adults from 1999 to 2004. Demographic questionnaire and file examination was used as a tool to select 5685 adult samples 18 39 years and not on antihypertensive medication. The study concluded that isolated systemic hypertension among young adults is increasing in prevalence. The determinants were people with obesity , smoking habits and who were in a low socio economic status..

R.I. Ekore and IO Ajayi (2007) conducted a study on case finding for hypertension in young adult patients attending a missionary hospital in Nigeria. Semi structured questionnaire was administered and physical examination was carried out as a tool for the sample selection. The samples included were 405 aged between 18 – 44 years. It was found that there was a high prevalence of undetected young adult cases of hypertension in Nigeria and also all these cases were presented with various categories of complication of hypertension.

Literature related to non pharmacological interventions to reduce blood pressure

T.Sujatha (2011) conducted "A study to assess the effectiveness of yoga (Navachetna Shivir) on blood pressure among clients with hypertension". An experimental design was adopted for the study. The study was conducted in Singaperumal Koil in TamilNadu, using simple random sampling technique. The study group was 100 hypertensive clients (50 in experimental and 50 in control) of

mild and moderate hypertension (140-169 mmHg Systolic Blood Pressure and 90-109 mmHg Diastolic Blood Pressure). The study findings showed that after the yoga therapy, the mean systolic blood pressure in the experimental group differed significantly compared to before intervention. The mean systolic blood pressure (SBP) reduced from 144.6 mm of Hg to 133.2 mm of Hg for the experimental group and for control group 143.2 mm of Hg to 142.6 mm of Hg. Diastolic blood pressure (DBP) in experimental group reduced from 89.3 to 85.1 mm of Hg whereas the change in DBP values of the control group was not significant. The study concluded that yoga (Avachetna shivir) was very effective in reducing blood pressure (BP) related complications.

Dr. Kamakhya kumar (2010), conducted a study to find out the effect of yoga nidra on hypertension and other co-relates in Patna. Practice time for yoga nidra was 30 minutes and the duration was fifteen days. 40 people suffering with mild hypertension (30 males and 10 females) were taken for the study. The results showed significant changes as yoga nidra positively decreased the blood pressure (both systolic and diastolic) as well as pulse rate, respiration rate and stress.

Medical Research was conducted by the physiology department of 'Lady Hardinge Medical College', and 'Sucheta Kripalani Hospital', New Delhi (2009) on varied groups of individuals. Sahaja-yoga meditators has revealed that the practice of sahaja yoga was accompanied by a decrease in tension, stress, anxiety, depression and hypertension. Studies were conducted upon 10 people in the age group between 35 to 50 by the Department of Physiology. They were given two days training by a qualified sahaja yoga teacher in the physiology department. Thereafter they practiced it 20 minutes daily, for a few weeks, under the guidance of a tutor. At fixed intervals doctors studied the effect of sahaja yoga on the heart rate, blood pressure, the level of the blood lactic acid, and the galvanic skin resistance (GSR), which showed whether the patients were tensed or relaxed. All 10 of them were patients of hypertension; some of them were on drugs. As the sahaja yoga practice progressed, the dosage of medicines were tapered and finally stopped. In the 12 weeks the diastolic blood pressure dropped from 100 mm of Hg to 80 mm of Hg and the adrenalin flow also dropped and thus the study concluded the effectiveness of sahaja yoga on hypertension at safe level.

Dr.Ali. E.U. (2008) conducted "A study to assess the efficacy of mind - body therapies (MBT) versus placebo or active control in the treatment of hypertension" in United States. The main outcome measures included change in systolic and diastolic blood pressure pre and post intervention period. A quasi non randomized controlled trial comparing mind body techniques (meditation, yoga and guided imagery) alone is combination with conventional treatment was used. Participants in these trials were men and non pregnant women above 18 years of age with hypertension. The types of intervention undertaken by the study participants were mind body techniques with the greatest rates of utilization being meditation, yoga and guided imagery techniques. The result found largely favourable effects of the most popular mind body therapies on systolic and diastolic blood pressure. Mind-body therapies significantly reduce systolic blood pressure (SBP) by mean of 11.52 mm of Hg and diastolic blood pressure (DBP) by a mean of 6.83 mm of Hg. The results showed that, of three mind body therapy analyzed Yoga therapies demonstrated results of the greatest magnitude, with the mean SBP reductions of 19.07 mm of Hg and DBP by 13.13 mm of Hg.

J.E. Bonadonna *et al.,* (2008) conducted an eight week study on medical and paramedical students to see if regular meditation for weeks period would make the students less anxious and stress reduced. The results were positive; the meditation did lower the stress and anxiety level of the students.

McCaffery. U. (2008) conducted a study on the effects of yoga on stress, body mass index, heart rate and blood pressure among hypertensive patients and found that yoga practices were associated with decreased blood pressure. Participants practiced yoga thrice a week for eight weeks. There was also a control group that received information about hypertension but no yoga instruction. Stress was measured with the Stress Assessment Questionnaire, and blood pressure information was taken from medical records. The study found a significant difference between the stress scores of experimental and control group. It was also found that blood pressure decreased continually from the second to the eighth week. Prior to the yoga treatment, the mean blood pressure was 160.89/98.52 mm of Hg, and at the conclusion of the eighth week it was 136.04/8 1.01 mm of Hg. The study concluded that yoga acts as an effective treatment for hypertension through the reduction of stress.

Kasetsomboon.L; Hallberg. R (2008) a study aimed at assessing the benefits of yoga on risk factors for coronary artery disease found that yoga has a significant effect in lowering high blood pressure. 30 Participants under a quasi non randomized controlled trials were engaged in yoga and meditation classes for 90 minutes a day thrice a week for six weeks. The mean baseline measure for blood pressure was 130/79 mm of Hg, and at the conclusion of the study, means blood pressure for the cohort dropped significantly to 125/74 mm of Hg showed the effectiveness of yoga on blood pressure.

As per T. Iyengar (2007) there is substantial evidence that yoga and stress are directly linked. According to Yoga, stress is an imbalance at the mental, physical or emotional level. Yoga is directed at improving ability to cope up with stressors. The tension associated with stress is stored mainly in the muscles, the diaphragm and the nervous system. If these areas are relaxed stress is reduced, minimizing the impact of stress on the individual. From the studies mentioned above **(T. Iyengar 2007, Myers *et al.* 2007, Bonadonna. E. 2008),** life style modifications also termed as non pharmacologic therapy, have an important and expanding role that complements drug therapy. Also non pharmacologic therapies can serve as initial therapy in stage-I hypertensive patients, facilitate medication step down or withdrawn among patients with well controlled hypertension, and prevent hypertension in high risk populations.

Smith *et al.,* (2007) conducted a study to assess the effectiveness of yoga in the treatment of hypertension and found that yoga reduced stress and anxiety. A comprehensive review of the effects of yoga on chronic diseases such as overweight, hypertension, high glucose and cholesterol level found that yoga was effective in lowering blood pressure. This review linked body mass index to hypertension and found that yoga can significantly reduce weight.

Devine, K. *et al.,* (2007) says that a study conducted by the Prevention Research center, Yale University looked at how yoga can benefit hypertension. The researchers found that yoga reduces systolic blood pressure by 19.05 mm of Hg and diastolic blood pressure by 13.13 mm of Hg.

Innes, Bourguignon & Taylor et al. (2005) says according to the centers for Disease Control and Prevention, Cardio Vascular Disease (CVD) is the number-one cause of death in the United States. A systematic literature review of 70 studies on

yoga therapy showed a trend toward beneficial changes in CVD risk factors, such as insulin resistance, lipid profiles, and blood pressure. Another comprehensive review of the literature on the psycho physiological effects of yoga concluded that a regular hatha yoga practice and a "yoga lifestyle" might reduce other CVD risk factors such as insulin sensitivity; lipid profiles. According to some experts, a typical hatha yoga routine burns 2.2-3.6 kilocalories per minute. Except in case of extremely deconditioned clients, this gentler form of yoga alone is unlikely to confer significant improvements in cardiovascular fitness, pulmonary function, and body composition of fat metabolism.

A study was conducted by the Department of Internal Medicine, University of Bologna, Italy (2004), about non pharmacological treatment of hypertension in women. A reduction in salt intake, an increase in physical activity and body weight reduction had clearly demonstrated to be effective in reducing high blood pressure values in women. A 4-8% of body weight reduction causes an average 3 mm of Hg blood pressure decrease. However many women tend to regain the weight (Weight cycling), and in this case an increase in blood pressure can be observed. When considering diet regulation, older women are less responsive to low calorie diets and sodium restrictions will be effective only by means of dose dependent way of anti hypertensive. The review says that regular physical activity, yoga or exercise can reduce blood pressure by at least 5/3 mm of Hg. While walking for at least 2 hour per week can reduce the risk of stroke by 50%. The study concluded that when comparing the non pharmacological measures like salt restriction, weight reduction, and physical activity/exercise/yoga to control blood pressure, the most effective measure will be the physical activity or practicing exercise or yoga than the salt restriction and weight reduction.

The Canadian Consensus Conference on non pharmacological approaches to the management of high blood pressure reviewed in March 1989, on its meeting in Halifax, data concerning the efficacy of eight interventional strategies used for controlling hypertension. The strategies included were alcohol restriction, weight reduction, physical exercise, reduction of salt intake, relaxation/stress management, increase of potassium and calcium intake, and combination of pharmacological and non -pharmacological management. Finally the review concluded that a combination of pharmacological and non- pharmacological management was an efficacious

measure to control high blood pressure at safe level. It also reviewed non pharmacological treatment of hypertension among the elderly. Although hypotensive effect of salt restriction was evident, severe salt restriction might result in impairment of Quality of Living (QOL) by decrease in appetite and consequent nutritional deterioration. Hypotensive effect of mild to moderate aerobic exercise was also evident. Previous report indicates that decrease in blood pressure was less in older subjects than in younger groups. Another study showed that blood pressure decreased even during 3-9 months after the beginning of exercise therapy. The findings indicated that decrease in blood pressure in the elderly was slower than younger subjects.

Lee Berk (2008) conducted a study on effect of laughter therapy on diabetic clients. In which 20 diabetic clients with hypertension was selected and was divided into experimental and control group. The tool used was demographic questionnaire. Two groups were taking prescribed medications for diabetes and hypertension which was continued and in additional the experimental group were given laughter therapy for 30 minutes for over a period of 12 months and then their stress hormones were investigated. It was found that the experimental group had a lower level of stress hormone when comparing with the control group who received no laugher therapy. The study concluded that laughter therapy may reduce the risk of heart disease associated with diabetes mellitus by reducing the level of stress hormones.

Ragava (2007) conducted a study on impact of laughter therapy in the control of stress among computer engineers. Eighty volunteers participated in 15 minutes laughter therapy for four weeks and the control group did not receive any intervention for duration of four weeks. The researcher used positive and negative stress scale as a tool before and after intervention and additionally stress hormones was checked. The study concluded that laughter therapy may change the reading of blood pressure by decreasing stress hormones.

Saptharishi.L(2007) conducted a study to assess the effectiveness of non-pharmacological management in control of hypertension among adults. Totally 113 adults participated for eight weeks. He divided the group in to three experimental and one control group. The aim of the study was to measure the benefit of brisk walking , less amount of salt intake to a least half of their previous intake and meditation on at

least five days per week in lowering blood pressure among hypertensive patients. After eight weeks all the experimental group showed a significant reduction in blood pressure. There was no significant change of blood pressure in the control group. This study concluded that brisk walking was most effective, and restriction of salt and meditation were also effective in control of hypertension.

Bennet.MP, *et .al* (1999) conducted a study to assess the effect of mirthful laughter in the study in 33 women. Experimental group viewed a humour vedio and the control group viewed a tourism video the humour group showed an increased immune function. laughter may improve natural killer cell activity. They revealed that humour was one of the most frequently used complementary therapy for cancer patients.

Literature related to relationship between sleep and blood pressure

Cyndy Irvine (2009) conducted a study to assess the effectiveness of sleep on blood pressure . 578 adult volunteers participated in the study. Total of five years, the researcher checked blood pressure and duration of sleep times. Individuals who slept less hours had significantly raise in blood pressure level. The result of this study showed each hour of reduction in sleep duration likely increase level of blood pressure.

David A Calhoum *et al.,* conducted a study on relationship between sleep and hypertension 2006 in which 587 samples were selected under randomized control trails. The study concluded that BP decreases during sleep and reduced dipping of blood pressure during sleep increases cardio vascular risk and insomnia with objective short sleep duration will also increase blood pressure.

Guo X *et al.,* conducted a study on epidemiological evidence of link between sleep duration and high blood pressure as a systemic review and meta analysis. The aim of the study was if there is a relationship between short and long sleep duration and hypertension in blood pressure among adults. From epidemiological evidence the investigator found the relationship quantitatively. The samples involved 2-5, 858 ranging from aim 18 – 106 years. The study concluded that short sleep during was associated with a high risk for hypertension which should be paid more attention to the life style factors.

Literature related to non pharmacological interventions to promote sleep

Bentoucif *et al,*. (2004) conducted a study to determine whether a single daily morning or evening activity session for 2 weeks would improve sleep and neuro psychological functions and whether these effects were dependent on the timing of the activity session. Subjective mood neuropsychological performance tasks and subjective and objective measures of sleep were assessed at baseline and after the intervention. 12 older women and men subjects participated in 14 days of structured activity sessions in the morning and evening. Sessions consisted of stretching, low-impact aerobics and game playing

The result suggested that short term exposure to either morning or evening social and physical activity improves objective measures of neurological performance and subjective sleep quality in the adults increasing exposure to social and physical activity may be useful intervention to improve sleep quality in adults.

K. Innes (2012) conducted a study on effect of yoga on sleep, mood and related outcomes in older women with Restless Leg Syndrome (RLS). Participants were drawn from a larger trial regarding the effects of yoga on Cardio Vascular Disease (CVD) risk profiles. 75 overweight sedentary post menopausal women aged 45-70 years were randomized to receive either an 8 week yoga (n=38), or educational film (n=37) program. Main outcomes assessed in pre and post treatments included measure of sleep (Pittsburgh sleep quality index), stress (Perceived stress scale), mood (State trait anxiety scale), blood pressure and heart rate. The results were, among participants with RLS, those assigned to yoga groups demonstrated significantly greater improvement than did controls in sleep quality, stress, mood, anxiety, and blood pressure (p0.05).The study concluded that yoga may offer a safe, effective intervention for reducing sleep and mood disturbance, perceived stress, anxiety and blood pressure in women with RLS.

A randomized study published in the journal Menopause (2012), found yoga helps to ease sleep problems and menopausal symptoms in post menopausal women. All the participants were not on hormone therapy and were diagnosed with insomnia. Brazilian researchers assigned 44 menopausal women with insomnia to yoga, physical therapy stretches or no treatment for 4 months. Questionnaires evaluating insomnia, menopause symptoms, anxiety, depression symptoms, stress and quality of life were

obtained from the participants. The yoga and physical therapy groups participated in sessions two times per week. The researchers found that yoga participants had significantly reduced insomnia severity and menopause symptoms and improved quality of life and stress resistance compared to the control group. In addition, the yoga group had significantly fewer sleep problems than the physical therapy groups.

A study published in Applied Psychophysiology and biofeedback (2011) found Researchers at Harvard Medical School in Boston taught 20 study participants yoga breathing, meditation and mantra in one training section. The participants practiced yoga training before bedtime by their own and brief-in person and telephone follow ups for eight weeks. The subjects maintained a sleep- wake diary for two weeks prior to treatment and for 8 weeks during the treatment period. The participant's sleep efficacy, total sleep time, total wake time, sleep onset latency, wake time after sleep onset, number of awakenings, and sleep quality measures were assessed from their sleep-wake diary entries. Researchers found that the participants had significantly improved sleep efficiency, total sleep time, total wake time, sleep onset latency, wake time after sleep onset at the end of treatment compared to before treatment. The study author Sat Bir Khalsa, Ph D, assistant professor of Harvard Medical School, concludes that "yoga is an effective treatment because it addresses insomnia's physical and psychological aspects.

P.K Neela *et al.,* (2011) conducted a study on "Perceptions of a community-based yoga intervention for older adults" aimed to assess the self-reported effects of yoga among older 'adults in an independent-living retirement community. Weekly 60-minutes of Iyengar yoga classes including stretching, flexibility, endurance, balance, and relaxation were conducted. Pre- and post intervention perceptions by focus-group discussions and key informant interviews were conducted at baseline, 12 weeks, and 1 year. Twelve older persons aged 65-89 (majority Hispanic) voluntarily participated. Perceived benefits included improved gait and balance, decreased pain, decreased need for medications and decreased stress, improved sleep, less anxiety and depression, increased mobility, increased self-awareness, and a greater sense of peace. No adverse events have been reported so far. Care giving obligations, relocation, and perceived interference with religious beliefs hindered the subjects' ability to fully

participate. Older adults perceived yoga benefits extended to mental, psychosocial, and spiritual health.

Chen *et al.* (2010) conducted a study on "Being relocated to an assisted living facility can result in sleep disturbances and depression in elderly". The study aimed to test the effects of a 6 month yoga exercise program in improving sleep quality and decreasing depression in transitional frail elders living in assisted living facilities. A quasi-experimental pretest-and-posttest design was used. A convenience sample of 69 elderly residents of assisted living facilities was divided randomly into a yoga exercise (n = 38) and control group (n = 31) based on residence location. A total of 55 participants completed the study. The intervention was implemented in three small groups, and each practice group was led by two pretrained certified yoga instructors three times per week at 70 min per practice session for 24 weeks. The outcome measures of sleep quality (Pittsburgh Sleep Quality Index) and depression state (Taiwanese Depression Questionnaire) were examined at baseline, at 12th week, and at 24th week of the study. After 6 months of performing yoga exercises, participants' overall sleep quality had significantly improved, whereas depression, sleep disturbances, and daytime dysfunction had decreased considerably. In addition, participants in the intervention group had better results on all outcome indicators than those participants in the control group.

Alebiosu OC, Ogunsemi *et. al.*, (2009) conducted a study on "Quality of sleep among hypertensive patients in a semi-urban Nigerian community: a prospective study". The objective of this study was to examine the quality of sleep among Nigerian hypertensive patients. The study aimed to measure the prevalence of "poor sleep" in hypertensive patients and to examine the association between quality of sleep and the severity of hypertension in this population. Quality of sleep was measured using the Pittsburgh Sleep Quality Index (PSQI) in chronic hypertensive patients attending a tertiary hospital in Nigeria. This was compared with normal control subjects. The study results showed that mean systolic blood pressure was 167.4 +1- 21.8 mm Hg (range, 100 - 210 mm Hg) while the mean diastolic blood pressure was 96.7 +1- 14.9 mm Hg (range, 60 - 130 mm Hg). Fifty-six (42.4%) hypertensive subjects were "poor sleepers" (global PSQI > 5), with a global mean PSQI of 5.03 +1- 3.28. This was significantly more than 17.3% of control subjects,

with a mean global PSQI of 3.10 +1- 0.83.The study concluded that poor sleep is common in hypertensive patients and may be associated with lower health-related quality of life.

The review of literature enlightened the investigator to develop an insight into the problems of patients with hypertension and benefits of yoga therapy especially pranayama in treating patients with hypertension. In this review of literature many studies were conducted to reduce the blood pressure like exercise, yoga and massage etc. This review helped the investigator to gain a deeper knowledge of the research problem and to design the study.

CHAPTER III

METHODOLOGY

This chapter provides a brief description of the method adopted for the study. Methodology of research indicates the general pattern of organizing the procedure of gathering a valid and reliable data for the problem under investigation (Kothari). The methodology of the study includes the research approach research design and setting of the study, population, sampling technique and criteria for samples development of tools , pilot study and data collection procedure**.**

RESEARCH APPROACH

In view of the nature of the problem and to accomplish the objectives of the study an evaluative approach was considered to be the most appropriate.

RESEARCH DESIGN

Repeated measure research design with one experimental and one control group was be used for the study.

- **GROUP I -O_1xxxxxxxO_2xxxxxxxO_3xxxxxxxO_4 xxxxxxxO_5**
- **GROUP II -O_1_____O_2_____O_3_____O_4_____O_5**
- **DAYS - D_1_____D_7_____D_{14}_____D_{21}_____D_{28}**

O_1 - Pre intervention observation of blood pressure and sleep.
O_2 to O_5- Post intervention observation of blood pressure and sleep from day 7 to day28

GROUP I --Experimental group
GROUP II -- Control group

VARIABLES IN THE STUDY

Dependent variable : Blood pressure and quality of sleep.

Independent variable : Laughter therapy.

SETTINGS OF THE STUDY

Settings refer to the area where the study is conducted. The setting of the study was a selected rural community at Kodangipalayam Tirupur district. The total population of the rural community was 1913. Mostly the adult young people are engaged in weaving and agriculture and most of them belong to the category of economically poor and illiterate. This community has all the basic facilities like schools, temple, balwadi, youth club and one private health centre. For all health problems the community people approach the PHC which is situated 7 kms away from this community.

POPULATION

The population for the study comprises of all the hypertensive clients with systolic Blood pressure above 130 mm Hg and diastolic blood pressure above 90 mm Hg residing in a selected community area at Coimbatore.

SAMPLE SIZE

In this study sample size was 60 hypertensive clients.

- Experimental group with 30 samples
- Control group with 30 samples.

SAMPLING TECHNIQUE

Non probability purposive sampling technique was adopted for the selection of samples.30 samples selected from one area were assigned to the experimental group and 30 samples from another area were assigned to the control group.

SAMPLING CRITERIA

Inclusion criteria

- Adults aged between 40-60 years of age
- Hypertensive adults with systolic blood pressure above 130 mm Hg and diastolic blood pressure above 90 mm Hg.
- Those who are willing to participate in the study.

Exclusive criteria

- Who are not willing to participate.
- Clients who have other co morbid illnesses like cardiac diseases, respiratory illness like history of bronchial asthma and other acute illnesses.
- High uncontrolled blood pressure systolic Bp >180mm of Hg and diastolic Bp >130 mm of Hg.

RESEARCH TOOL

The tool used for the collection of the data were

1.Structured interview schedule.

2. Blood pressure recording sheet.

1 .The interview schedule consisted of two sections

Section 1: Consisted of demographic variables such as age, sex occupation, family income, physical exercise, food habits and duration of antihypertensive medication .

Section 2: Consisted of sleep quality index scale. It is standardized tool to assess the quality of sleep. It has 9 items which subjectively describe the patients sleep quality for the night. The Pittsburgh sleep quality index covered domains includes subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medication , and daytime dysfunction. Each domains scores are summed to produce a global score (0-21).

- Total score ≤ 5 associated with good sleep.
- Total score ≥ 5 associated with poor sleep.

2. B1ood pressure observation record designed to measure the systolic blood pressure on every 7th day for total period was 28 days.

SCORING AND INTERPRETATION OF SCORING

Scoring sleep assessment:

Score ≤ 5 associated with good sleep.

Score ≤ 5 associated with poor sleep.

BLOOD PRESSURE INTERPRETATION

THREE STAGES OF HYPERTENSION

PRE HYPERTENSION	STAGE I HYPERTENSION	STAGE II HYPERTENSION
139 mm of Hg	159 mm of' Hg	>160mm of Hg
80-89mm of Hg	90-99 mm of Hg	>100mm of Hg

Development of teaching plan on laughter therapy:

Laughter therapy was developed by the investigator on the basis of the one month laughter therapy training session attended by the investigator under a certified laughter therapy specialist and a certificate for the same was obtained by the investigator on laughter therapy.

The laughter therapy is an excellent type of exercise which controls blood pressure by reducing the release of stress related hormones and bringing about relaxation to the body.

STEPS OF LAUGHTER THERAPY

STEP 1: One laughs freely and loudly with open mouth.

STEP 2 : One laughs without sound with closed mouth.

STEP 3 : One pours out loud bursts of laughter through the throat like neighing of horse.

All three steps are performed 5 times in the evening time for 20 minutes with the regular guidance of the investigator for a time period of 30 days. While performing these exercises one raises the hands up, brings down and bends the body at the waist according to the onces ability.

After the laughing exercise is completed, the teacher instructs the clients for a cooling down process in which one takes deep breaths and gradually raises arms and gradually inhales and exhale the breathe.

The following steps were adopted to develop the teaching plan

1 .Formulation of specific objective.

2.Selection of teaching learning content.

3.Selection of teaching learning activity.

4.Organisation of content.

The contents included are

1. Basic concept of laughter therapy.
2. Purpose of laughter therapy.
3. Demonstration of laughter therapy.
4. Redemonstration.
5. Follow up.

The teaching plan is developed by keeping in mind the objectives, literacy level of the sample, and simplicity of the language.

CONTENT VALIDITY

The prepared questionnaire, blood pressure recording sheet and standard tool for sleep assessment were submitted to two experts, two nurses and two laughter therapy specialized masters, The two are professors with master degree in nursing and working in different college of nursing in Coimbatore with more than 5 users experience. The laughter yoga therapist had M.Phil in laughter therapy.

Based on the suggestions given by the experts and the researcher modified the blood pressure recording sheet and added some questions in the demographic data.

RELIABILITY OF THE RESEARCH TOOL

Internal consistency was demonstrated in a sample of patients with sleep disorders. The test retest reliability was 0.82 which confirms that there was a high positive correlation and the internal consistency of the tool.

PILOT STUDY REPORT

A pilot study was conducted in the community at Coimbatore, in order to test the practicability and feasibility of the study. Based on the inclusive criteria 10 hypertensive clients were selected from the family folder record and they were randomly assigned to the experimental and the control group.

Pilot study was conducted in the community with the prior permission. For the experimental and the control group the blood pressure and the sleep assessment was done before starting the intervention. The investigator taught laughter therapy to the experimental group which was practiced for 20 minutes every day in the presence of the investigator for a period of 28 days. For the control group no therapy was given. The total period of data collection was 14 days. Every 7th day interval sleep and blood pressure assessment was done for both the experimental and the control group. The pilot study confirmed the adequacy of the tool and technique. Hence no modification was required.

DATA COLLECTION PROCEDURE

The hypertensive patients were identified from the family folders and op registers kept in the community health center. Patients from two different areas were

listed down. Those who fulfilled the sampling criteria were selected 30 for experimental and 30 for control group according to the convenience in two different areas. After selecting the experimental group the investigator explained the purpose of the study and obtained their willingness to participate in the study. Pretest blood pressure and quality of sleep was assessed on before intervention Investigator divided the group in to three sub groups and the laughter therapy was taught to them and they were made to practice it 20 minutes daily under the supervision of the investigator. The post test blood pressure was assessed at an interval of 7 days (7,14,21,28) interval for 28 days . For the experimental group no therapy was given. The baseline and subsequent observation of blood pressure and quality of sleep were assessed every 7th day for a period of 28 days.

PLAN FOR DATA ANALYSIS

The data obtained was analysed in terms of the objectives of the study using descriptive and inferential statistics.

DISCRIPTIVE STATISTICS

Frequency and percentage distribution were used to analyse demographic variables and to assess the blood pressure and sleep quality.

Mean and standard deviation was used to determine the difference in level of blood pressure and quality of sleep.

INFERENTIAL STATISTICS

The 't' test was used to determine the significance of the difference in level of blood pressure and quality of sleep between the experimental and the control group.

The 'chi-square' test was used to find the association of demographic variables and level of blood pressure.

CHAPTER –IV

DATA ANALYSIS AND INTERPRETATION

James A. Fin (2003) defines data analysis as the "Systematic organization and synthesis of research data, and the testing of research hypothesis using those data" Interpretation is the process of making sense of the results of a study and examining their implications.

This chapter deals with the analysis and interpretation of data gathered from 60 hypertensive clients from selected community in Tirupur district with regards to their demographic characters, blood pressure and sleep quality The data have been analayzed and presented under the following headings.

4.1 Demographic characteristics of the samples in experimental and control group

Demographic characteristics of the sample have been presented in relation to personal characteristics, food, medications, habits comparatively for the experimental and control group in frequency and percentage.

4.2 Assessment of blood pressure in experimental and control group

Blood pressure has been analyzed in three stages (pre hypertensive, stage I and stage II) for the experimental and control group before and after intervention in frequency and percentage. Comparison of blood pressure in experimental and control group has been done by mean score and its significance by statistical test.

4.3 Assessment of quality of sleep in experimental and control group

Sleep quality has been analyzed with Pittsburgh standard sleep scale for the experimental and control group before and after intervention in frequency and percentage. Also comparison of the mean score and the level of significance between the experimental and control group before and after intervention were made.

4.4 Association of demographic variable with two levels of blood pressure before intervention

TABLE 4.1

DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLES

TABLE 4.1.1

FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE RELATED TO PERSONAL CHARACTERISTICS

N= 60

	Characteristics	Experimental group n=30		Control group n=30	
		F	%	F	%
1.	Age (in years) a) 40-50 b) 50-60	 15 15	 50.0 50.0	 14 16	 46.7 53.3
2.	Sex a) Male b) Female	 10 20	 33.3 66.7	 15 15	 50 50
3.	Occupation a .Employed b .Unemployed	 25 5	 83.3 16.7	 15 15	 50 50
4.	Educational status a. literates b. Illiterate	 5 25	 16.7 83.3	 10 20	 33.3 66.6
5.	Monthly income a. < Rs5000 b.Rs5000 and above	 20 10	 66.7 33.3	 20 10	 66.7 33.3

TABLE 4.1.1 Presents the frequency and percentage of samples related to personal characteristics

AGE: In the experimental and the control group all the samples were almost equally distributed in two categories of age groups. Half of the samples 15(50%) in experimental group and more than half of the samples 16(53.3%) in control group were in the age group 50-60 years and the remaining were in the age group of 40-50 years

SEX: Majority of the samples in experimental group 20(66.7%) were females and the remaining were males 10(33.3%) whereas in the control group the females 15(50%) and males15(50%) were equally distributed .

OCCUPATION: Most of the samples in experimental 25(66.7%) group where employed and the remaining 5(16.7%) were unemployed whereas in the control group there was an equal distribution among the samples based on the occupation i.e employed 15(50%) and unemployed15(50%).

EDUCATION: In the experimental group the majority of the samples were illiterates 25(83.3%) and the remaining 5(16.7%) were literates and in the control group a majority of 20(66.6%) were illiterates and the remaining were 10(33.4%) literates.

MONTHLY INCOME: The majority of samples in both experimental 20(66.7%) and control group 20(66.7%) were in the income group of <RS 5000 per month and equal number in the experimental group10(33.3%) and control group10(33.3%) had an income of RS 5000 and above.

TABLE –4.1.2

FREQUENCY AND PERCENTAGE OF THE SAMPLES ACCORDING TO EXERCISE AND TREATMENT

N=60

S NO	CHARACTERISTICS	EXPERIMENTAL GROUP n=30		CONTROL GROUP n=30	
		F	%	F	%
1.	Habits Of Exercise				
	a. Yes	10	33.3	5	16.7
	b. No	20	66.7	25	83.3
2.	Types of exercise				
	a. Walking	10	33.3	5	16.7
	b. Nil	20	66.7	25	83.3
3.	Taking hypertensive Medication				
	a. Yes	30	100	30	100
	b. No	0	0	0	0
4.	Regularly taking anti hypertensive medications				
	a. Yes	25	83.3	26	86.7
	b. No	5	16.7	4	13.3
5.	Duration of treatment				
	a. Less than 2 years	15	50.0	20	66.7
	b. More than 2 years	15	50.0	10	33.3

Table 4.1.2 presents the demographic data related to exercise and antihypertensive medications.

HABITS OF EXERCISE: Majority of samples in both experimental 20 (67.7%) and control group25(83.3%) had no habit of doing exercise whereas only 5(16.7%)in control group and 10(33.3%)in experimental group had the habits of doing exercise.

TYPES OF EXERCISE: Walking was the only form of exercise for both the experimental 10(33.3%) and control group5 (16.7%).

TAKING HYPERTENSIVE MEDICATIONS: All the samples in the experimental 30(100%) and the control group30 (100%) were talking hypertensive medications.

Majority of samples 25(83.3%) in experimental group and 26(86.7%) in control group took medications regularly.

DURATION OF THE ANTI HYPERTENSIVE MEDICATIONS: In the experimental group half of the samples 15(50%) were taking antihypertensive drugs for less than 2 years and remaining for more than 2 years, where as in the control group 20(66.7%) of samples were taking medications for <2 years and rest 10(33.3%) were taking medications for >2years.

TABLE 4.1.3

FREQUENCY AND PERCENTAGE OF SAMPLES ACCORDING TO FOOD HABITS

N=60

Sno	Food	Experimental Group n=30		Control Group n=30	
		F	%	F	%
1	**Type of food**				
	a) Vegetarian	0	0	0	0
	b)Non –vegetarian	30	100	30	100
2	**Extra intake of salt**				
	a)Yes	0	0	0	0
	b)No	30	100	30	100

Table 4.1.3- presents the data related to food habits

All samples 30(100%)in both experimental and control group(100%) were non vegetarians and were not taking extra salt in food.

SECTION 4.2

ASSESSMENT OF BLOOD PRESSURE IN EXPERIMENTAL AND CONTROL GROUP

TABLE-4.2.1

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL GROUP IN THREE LEVELS OF BLOOD PRESSURE BEFORE AND AFTER INTERVENTION

N=30

S No	Level of blood pressure	Experimental group n=30									
		Before intervention 1st day		After intervention							
				7th day		14th day		21st day		28th day	
		F	%	F	%	F	%	F	%	F	%
1.	Pre hypertension stage	-	-	-	-	1	3.3	10	33.4	22	73.4
2.	Stage I(120-159\80-89)	6	20.0	21	70.0	28	93.4	20	66.6	8	26.6
3.	Stage II(>169\>100)	24	80.0	9	30.0	1	3.3	-	-	-	-

TABLE 4.2.1 Presents the three levels of blood pressure in the experimental group before and after intervention

In the experimental group majority of the samples 24(80%) had stage II hypertension and remaining 6(20.0%) had stage I hypertension before intervention. After intervention on 7th day, most of the samples 21(70%) had reduced blood pressure from stage II to stage I and the remaining few 9(30%) were still in stage II. From 14th to 28th day the level of hypertension again reduced and finally on 28th day most of the samples 22(73.4%) were in the pre hypertension stage and only 8(26.6%) were in stage I. This table concludes that after intervention a gradual reduction in hypertension seen from 7th to 28th day which showed that intervention was effective.

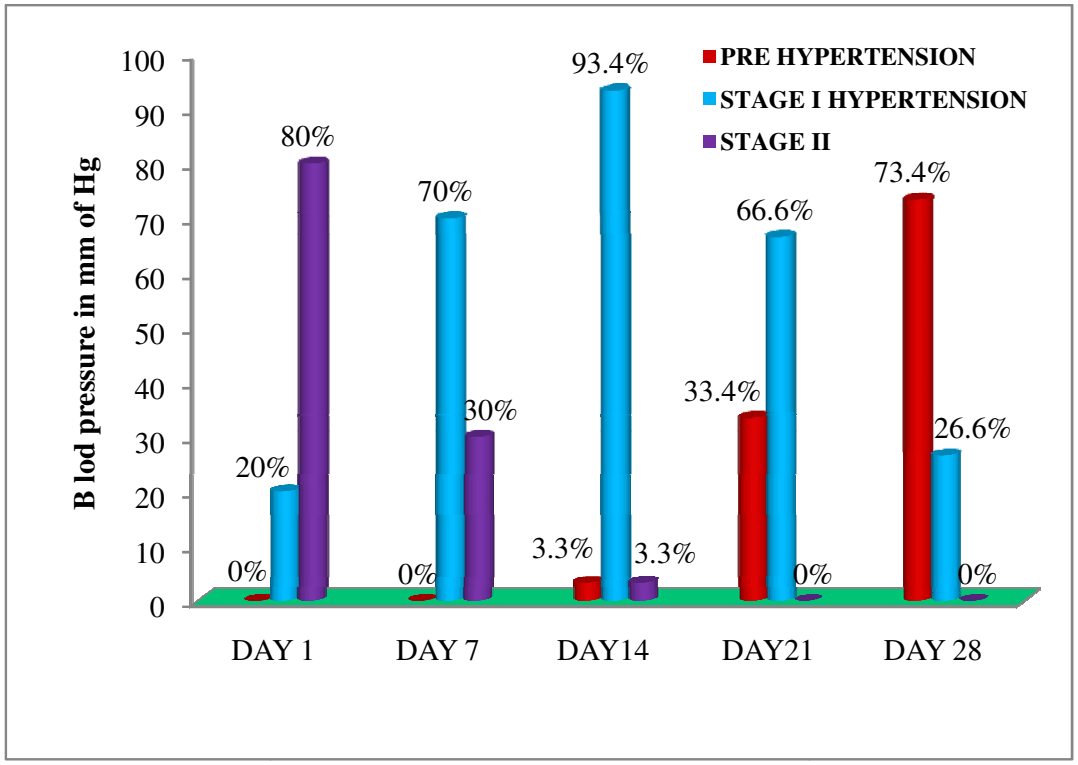

Figure-4.2.1 percentage distribution of experimental group in three levels of blood pressure before and after intervention

TABLE 4.2.2

FREQUENCY AND PERCENTAGE DISTRIBUTION OF CONTROL GROUP IN THREE LEVELS OF BLOOD PRESSURE IN BASELINE AND SUBSEQUENT OBSERVATIONS

N=30

Levels of blood pressure	Control group n=30									
	Baseline observation day 1		Subsequent observation							
			7th day		14th day		21st day		28th day	
	F	%	F	%	F	%	F	%	F	%
Pre hypertension stage	-	-	-	-	-	-	-	-	-	-
Stage I(120-159\80-89)	10	33.4	9	30	11	36.6	11	36.6	11	36.6
Stage II(>169\ >100)	20	66.6	21	70	19	63.4	19	63.4	19	63.4

TABLE-4.2.2 presents the control group in three levels of blood pressure before and after intervention

The above table explains that most of the samples 20(66.6%) in control group had stage II hypertension and rest 10(33.4%) had stage I hypertension in the base line observation on day 1. In the subsequent observations from the day one to 28th day number of samples in the stage I and II hypertension remains almost the same.

The table concludes that in control group there was no much change in the level of hypertension in the baseline and the subsequent observations.

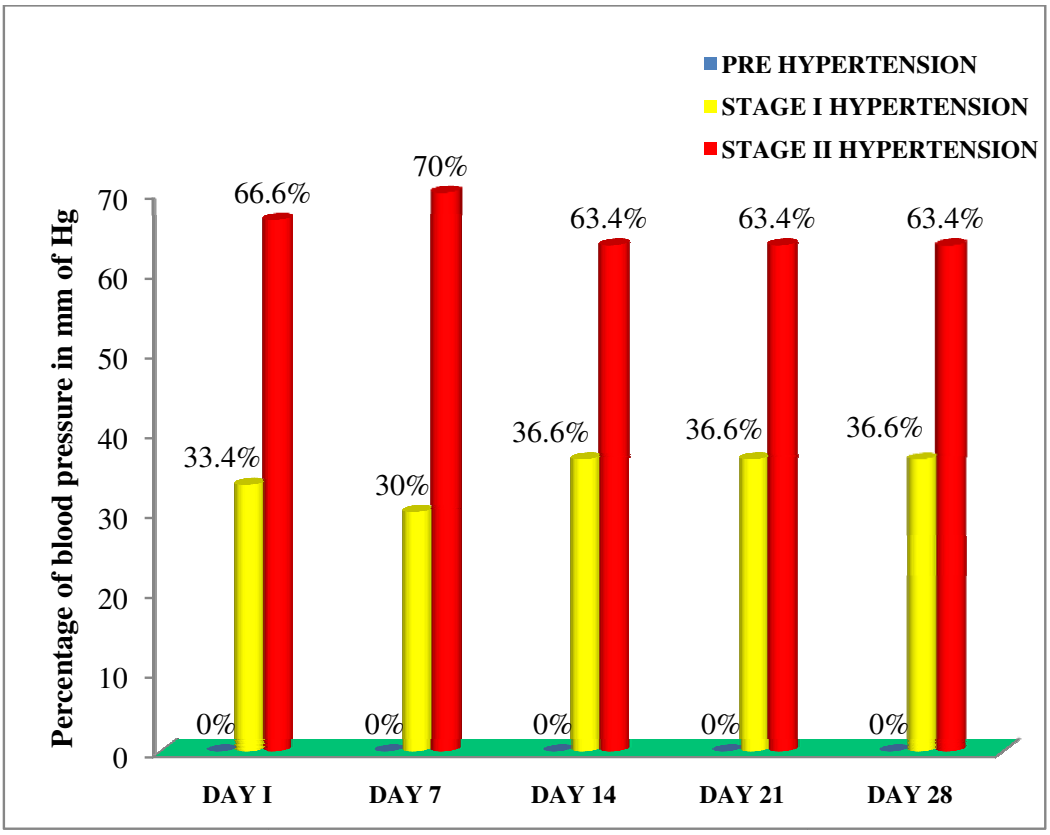

Figure 4.2.2 percentage distribution of control group in three levels of blood pressure in baseline and subsequent observations.

TABLE- 4.2.3

MEAN SYSTOLIC BLOOD PRESSURE OF EXPERIMENTAL AND CONTROL GROUP BEFORE AND AFTER INTERVENTION AND LEVEL OF SIGNIFICANCE

Intervention	Experimental group N=30		Control group N=30		Mean difference	Un paired 't' value P=0.05% d.o.f=58
	Mean	SD	Mean	SD		
Before intervention	160	6.43	160	8.31	0.00	000=NS
After intervention(28th day)	132	6.64	157	5.96	25.0	15.34*

***-Significant d.o.f-degree of freedom: t=2.00**

TABLE-4.2.3 Presents the mean systolic blood pressure of the experimental and control group before and after intervention.

The data suggest that the mean systolic blood pressure of the experimental group (160) and control group (160) was equal before intervention. Statistically there was no significant difference between the mean systolic blood pressure of the experimental and the control group before intervention (t= 0.00, dof=58, p=0.05).

Mean systolic blood pressure of the experimental group (132) was less than the mean systolic blood pressure of the control group (157) after intervention. Statistically there was a significant difference between the mean systolic blood pressure of experimental and control group after intervention. So H_1"There will be significant difference in mean systolic blood pressure after intervention in experimental group and the control group was accepted at 5% level of significance.

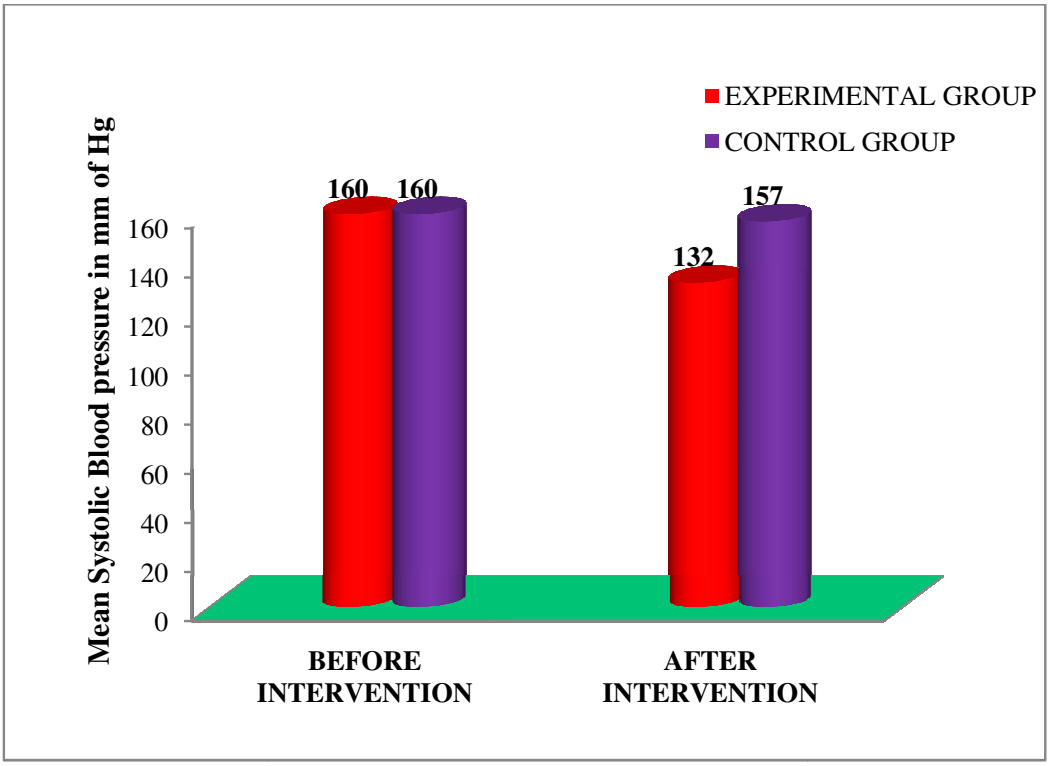

Figure 4.2.3. mean systolic blood pressure of experimental and control group before and after intervention

TABLE 4.2.4

MEAN DIASTOLIC PRESSURE OF EXPERIMENTAL AND CONTROL GROUP BEFORE AND AFTER INTERVENTION AND LEVEL OF SIGNIFICANCE

N=60

Intervention	Experimental group n=30		Control group n=30		Mean difference	Unpaired 't' value P=0.05% d.o.f=58
	Mean	SD	Mean	SD		
Before intervention	93.67	5.56	96.0	6.75	2.33	1.46 NS
After intervention (28th day)	80.67	2.54	90.33	4.14	9.66	10.91*

NS-not significant *-significant d.o.f-degree of freedom: t=2.00

TABLE –4.2.4 Presents the mean diastolic blood pressure of experimental and control group

The data suggested that the mean diastolic pressure of the experimental group (93.67) and in the control group (96.0) were almost in the same range before intervention. Statistically there was no significant difference between experimental group and control group before intervention. After intervention the mean diastolic pressure in experimental group was reduced from (93.67) to (80.67) compared to control group (90.33). Statistically there was a significant difference between mean diastolic pressure of experimental group and control group after intervention.

Hence Hypothesis H_2 "There will be a significant difference in mean diastolic blood pressure of the experimental and control group before after intervention is accepted at 5% level of significance.

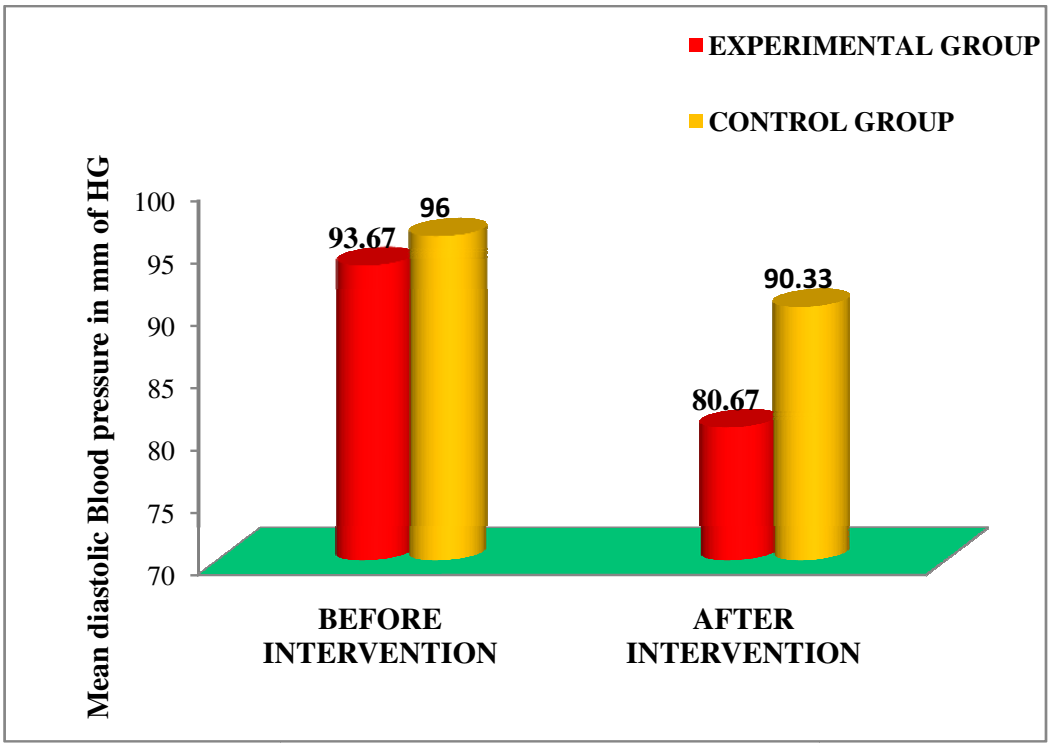

Figure - 4.2.4 mean diastolic pressure of experimental and control group before and after intervention

TABLE 4.3.1

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL GROUP ACCORDING TO QUALITY OF SLEEP BEFORE AND AFTER INTERVENTION

S no	Sleep Quality	Experimental group n=30									
		Before intervention 1st day		After intervention							
				7th day		14th day		21st day		28th day	
		F	%	F	%	F	%	F	%	F	%
1.	Good Quality Of Sleep(≤5)	-	-	-	-	2	6.7	5	16.7	27	90.0
2.	Poor Quality Of Sleep(>5)	30	100.0	30	100.0	28	93.3	25	83.3	3	10.0

***-Significant d.o.f -degree of freedom**

TABLE- 4.3.1 Presents percentage distribution of experimental group according to quality of sleep

In the experimental group before intervention all the sample 30(100%) had poor quality of sleep. But after intervention from 14th day onwards the number of samples with poor quality of sleep was decreased. At 28th day majority of 27(90%) the samples had good quality of sleep and only 3(10%) with poor quality of sleep.

The table concludes that majority of samples had good quality of sleep on 28th day after intervention which showed that the intervention was effective.

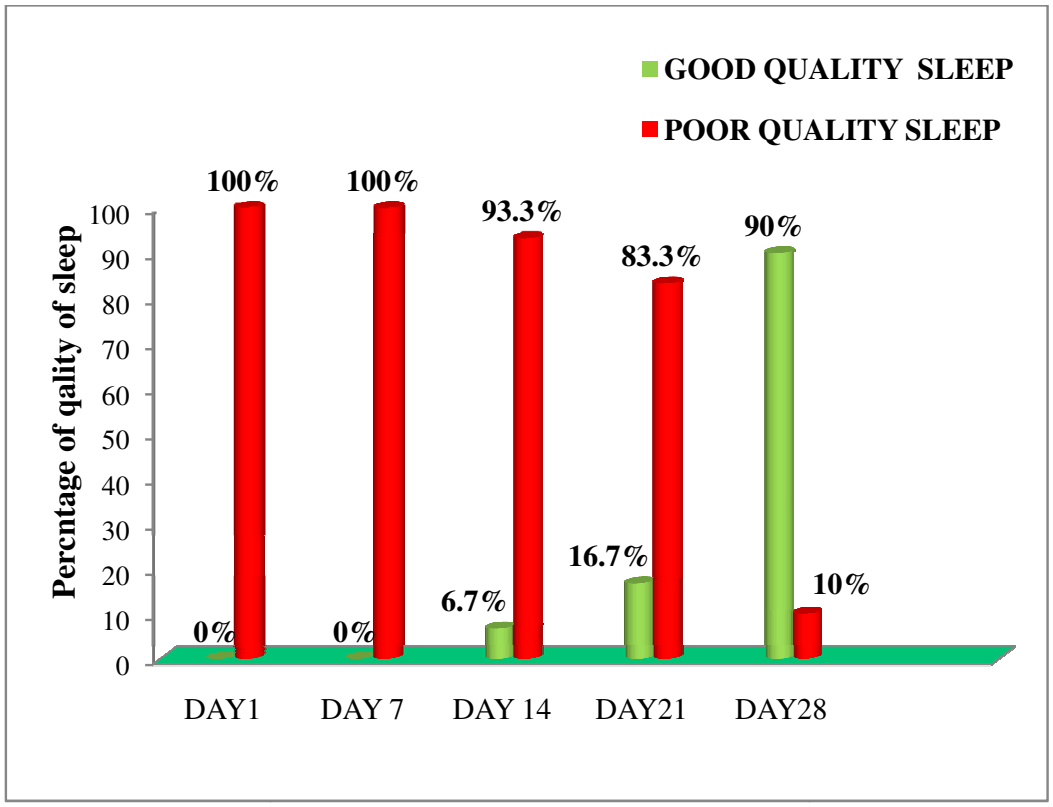

Figure - 4.3.1 percentage distribution of experimental group according to quality of sleep before and after intervention

TABLE-4.3.2

FREQUENCY AND PERCENTAGE DISTRIBUTION OF CONTROL GROUP ACCORDING TO QUALITY OF SLEEP IN BASELINE AND SUBSEQUENT OBSERVATIONS

N=30

Sleep Quality	Control group n=30									
	Baseline observation 1st day		Subsequent observation							
			7th day		14th day		21st day		28th day	
	F	%	F	%	F	%	F	%	F	%
Good Quality Of Sleep(<5)	-	-	-	-	-	-	-	-	-	-
Poor Quality Of Sleep(>5)	30	100.0	30	100.0	30	100.0	30	100.0	30	100.0

Table-4.3.2 Presents the distribution of control group according to quality of sleep

In the control group baseline observation and in subsequent observations all the samples 30(100%) had poor quality of sleep.

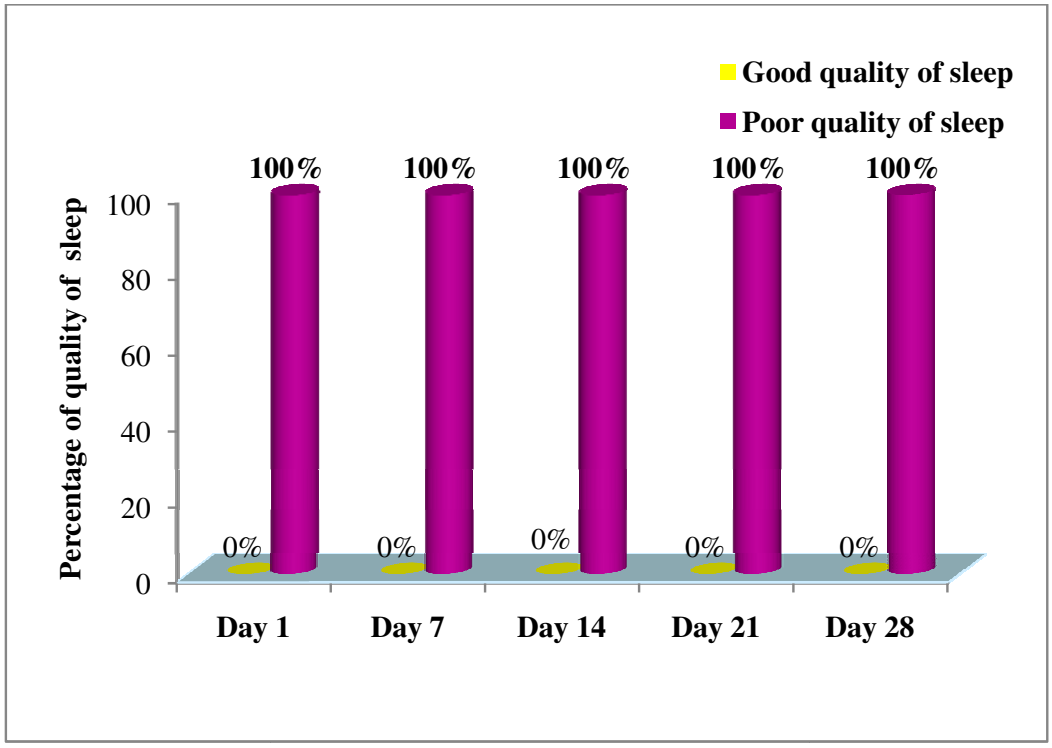

Figure 4.3.2 percentage distribution of control group according to quality of sleep in baseline and subsequent observations

TABLE 4.3.3

MEAN SLEEP SCORE OF THE EXPERIMENTAL AND CONTROL GROUP BEFORE AND AFTER INTERVENTION AND THE LEVEL OF SIGNIFICANCE

N=60

Intervention	Max Score	Experimental group n=30			Control group n=30			Mean difference	Unpaired 't' value
		Mean	%	SD	Mean	%	SD		P≤0.05 df=58
Before intervention	20	15.57	77.85	1.995	15.80	79.0	2.06	0.23	0.446NS
After intervention (28th day)	20	3.90	19.5	1.29	18.10	90.5	1.32	14.2	58.41*

***-Significant d.o.f -degree of freedom NS=Not significant**

TABLE 4.3.3 presents the mean sleep score of experimental and control group before and after intervention

The data suggested that the mean sleep score of experimental group (15.57) was almost equal to the mean of control group (15.80) before intervention. However statistically there was no significant difference between the mean sleep score of experimental and control group before intervention.

After intervention the mean sleep score in the experimental group reduced from 15.57 to 3.9 whereas in the control group the mean sleep score was increased from 15.80 to 18.10. i.e the mean sleep score in experimental group was reduced compared to control group after intervention. Statistically there was a significant difference between the mean sleep score of experimental and control group after intervention.

Therefore Hypothesis H_3 there will be significant difference in mean sleep scores between experimental and control group after intervention is accepted. It indicates the effectiveness of laughter therapy in the experimental group.

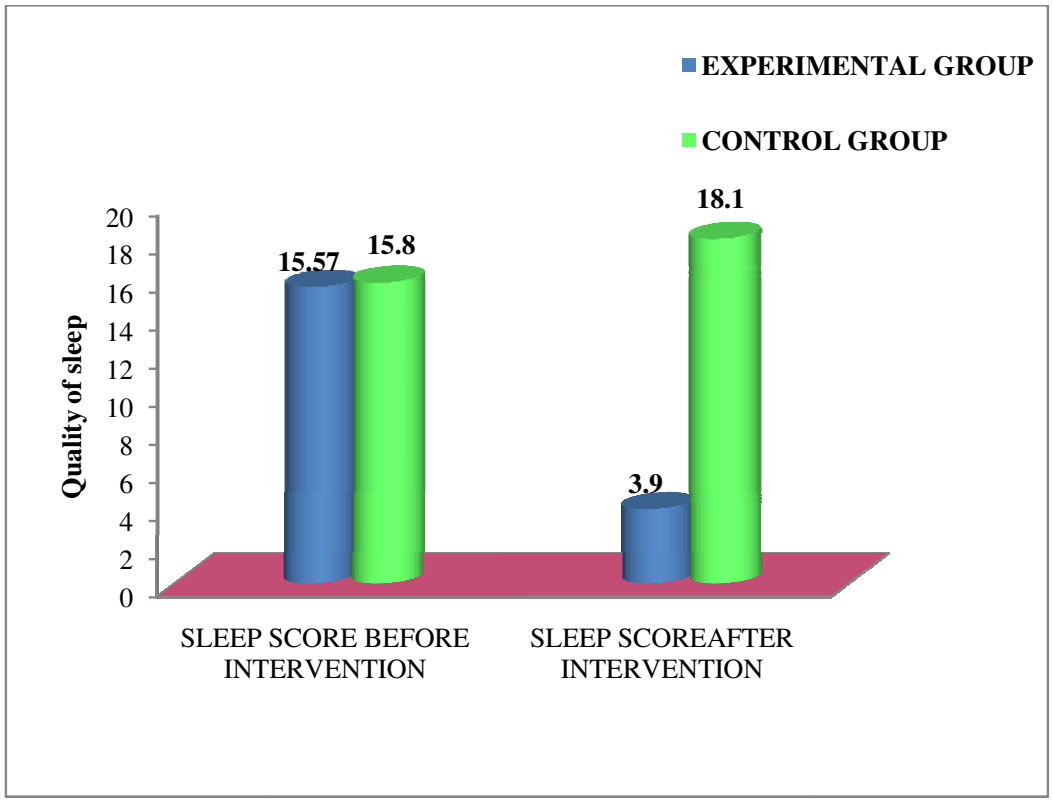

Figure 4.3.3. mean sleep score of the experimental and control group before and after intervention.

TABLE-4.4.1

ASSOCIATION OF DEMOGRAPHIC VARIABLE WITH TWO LEVELS OF BLOOD PRESSURE BEFORE INTERVENTION

SNO	Demographic Variables	BLOOD PRESSURE		X^2 Value $p \leq 0.05$ df= 1
		Stage I Hypertension	**Stage II Hypertension**	
1.	Age (in years) a)40-50 b)50-60	 13 13	 16 18	 NS 0.051
2.	Sex a)Male b)Female	 12 14	 13 21	 NS 0.380
3.	Occupation a. Farmer/labour b. Private employee c .Unemployed	 14 12	 26 8	 NS 3.394
5.	Monthly income a. < Rs5000 b.Rs5000 and above	 19 11	 21 9	 NS 0.217
6.	Educational status a. Literate b. Illiterate	 8 18	 7 27	 NS 0.814
7.	Habits Of Exercise a. Yes b. No	 6 20	 8 26	 NS 0.002
8.	Types of exercise a. Walking b. Nil	 6 20	 9 25	 NS 0.090
9.	Regularly taking anti hypertensive medications a.Yes b.No	 23 3	 28 6	 NS 0.431
10.	Duration of antihypertensive medications a. Less than 2 years b. More than 2 years	 18 8	 17 17	 NS 2.242

NS Non significant, *-significant

TABLE-4.4.1 Presents the association of demographic variables with three levels of blood pressure before intervention.

There is no association between age, sex, occupation, monthly income, education, exercise habits and regular and time duration of intake of antihypertensive medication with the level of blood pressure.

CHAPTER –V

DISCUSSION

The discussion section is devoted to a thoughtful analysis of the findings, leading to a discussion of their clinical and theoretical utility.

(Polit , D. F., & Beck, C. T)

This study is focused on assessing the effect of laughter therapy on sleep and blood pressure among adults residing in selected communities at Tirupur District. The three steps of laughing exercises introduced in the study were repeated for 20 minutes in the evening.

Demographic characteristics of the sample

Table 4.1 presents the frequency distribution of the demographic characteristics of the sample.

Table:4.1.1- Presents the frequency distribution of the demographic characteristics of the samples in the experimental group and control group in relation to Age in years ,sex, educational status, occupation, exercises, monthly income, treatment for hypertension and dietary habits. In the experimental and the control group all the samples were almost equally distributed in two categories of age groups. Half of the samples 15(50%) in experimental group and more than half of the samples 16(53.3%) in control group were in the age group 50-60 years and the remaining were in the age group of 40-50 years.

Majority of the samples in experimental group 20(66.7%) were females and the remaining were males 10(33.3%) whereas in the control group the female's 15(50%) and males15(50%) were equally distributed .

Most of the samples in experimental 25(66.7%) group where employed and the remaining 5(16.7%) were unemployed whereas in the control group there was an equal distribution among the samples based on the occupation i.e employed 15(50%) and unemployed15(50%).

In the experimental group the educational status majority of the samples were illiterates 25(83.3%) and the remaining 5(6.7%) were illiterates whereas in the control group a majority of 20(66.6%) were illiterates and the remaining were 10(33.3%) were literates.

The majority of samples in both experimental 20(66.7%) and control group 20(66.7%) were in the income group of RS <5000 per month and equal number in the experimental group10(33.7%) and control group10(33.7%) had an income of RS 5000 and above.

TABLE–4.1.2- explains the frequency and percentage of samples in experimental and control group according to personal characteristics and treatment for hypertension. The data reveals ,Majority of samples in both experimental20(67.7%) and control group25(83.3%) had no habit of doing exercise whereas only 5(16.7%)in control group and 10(33.3%)in experimental group had the habits of doing exercise.

Walking was the only form of exercise for both the experimental 10(33.3%) and control group 5(16.7%).All the samples in the experimental 30(100%)and the control group30(100%) were talking hypertensive medications .

Majority of samples 25(83.3%) in experimental group and 26(86.7%) in control group took medications regularly. In the experimental group half of the samples 15(50%) were taking antihypertensive drugs for less than 2 years and remaining for more than 2 years ,where as in the control group 20(66.7%) of samples were taking medications for < 2 years and rest10(33.3%) were taken for >2years.

TABLE 4.1.3- explains the frequency and percentage of samples in experimental and control group according to food habits. The data reveals all samples 30(100%)in both experimental and control group(100%) were non vegetarians and were not taking extra salt in food.

TABLE 4.2 PRESENTS THE FREQUENCY AND PERCENTAGE OF EXPERIMENTAL AND CONTROL GROUP IN THREE LEVELS OF BLOOD PRESSURE BEFORE AND AFTER INTERVENTION.

TABLE 4.2.1- According to the table the frequency and percentage distribution of experimental and control group in three levels of blood pressure before and after intervention is explained. In the experimental group majority of the samples 24(80%) had stage II hypertension and remaining 6(20.0%) had stage I hypertension before intervention. After intervention on 7^{th} day, most of the samples 21(70%) had reduced hypertension from stage II to stage I and the remaining few 9(30%) were still in stage II. From 14^{th} to 28^{th} day the level of hypertension again reduced and finally on 28^{th} day most of the samples 22(73.4%) were in the pre hypertension stage and only 8(26.6%) were in stage I.

The present study finding is consistent with the study done by **Madan Katariya (2007)** in which 30 patients with mild to moderate essential hypertension who participated in 20 min laughter therapy over three weeks. The result of the study showed that there were significant reduction in systolic pressure ($p<0.01$)and diastolic pressure (<0.05).

FREQUENCY AND PERCENTAGE OF CONTROL GROUP IN THREE LEVELS OF BLOOD PRESSURE IN BASELINE AND SUBSEQUENT OBSERVATIONS

TABLE 4.2.2 The above table explains that most of the samples 20(66.6%) in control group had stage II hypertension and rest 10(33.4%) had stage I hypertension in the base line observation on day 1. In the subsequent observations from the day one today 18, the number of samples in the stage I and II hypertension remains almost the same .

The table concludes that in control group there is no much change in the level of hypertension in the baseline and the subsequent observation.

The present study finding is consistent with the study done by **Madan Katariya (2007)** in which 30 patients with mild to moderate essential hypertension who participated in 20 min laughter therapy over three weeks. The result of the study

showed that there were significant reduction in systolic pressure ($p<0.01$)and diastolic pressure (<0.05).

TABLE 4.2.3 Presents the mean systolic blood pressure of the experimental and control group before and after intervention and the level of significance.

As per table 4.2.3 the data suggest that the mean systolic blood pressure of the experimental group(160) and the mean systolic blood pressure in control group(160) were equal before intervention. Statistically there was no significant difference between the mean systolic blood pressure of the experimental and the control group before intervention(t= 0.00,dof=58,p=0.05)

But the mean post intervention systolic blood pressure of experimental group on 28th day was 132 and in the control group it was 157 for which the "t" value was 15.34 which was significant at 0.05 level.

So H_1"There will be significant difference in mean systolic blood pressure after intervention in experimental group and the control group was accepted at 5% level of significance.

The present study findings is consistent with the study done by **Dr. Iillona papousekb** (2004) in which 30 hypertensive patients participated in regular laughter therapy over a period of six weeks. The results of pre and post test revealed that laughter therapy was effective in controlling the blood pressure.

TABLE 4.2.4 The data suggested that the mean diastolic pressure of the experimental group (93.67) and in the control group(96.0) were almost in the same range before intervention. Statistically there was no significant difference between experimental group and control group before intervention . After intervention the mean diastolic pressure in experimental group is reduced from (93.67) to(80.67) compared to control group (96) to (90.33).

But the mean post intervention diastolic blood pressure of experimental group on 28th day was80.67 and in the control group was 90.33 for which the "t" value was 10.91 which was significant at 0.05 level of significance.

Hence Hypothesis H_2 "There will be a significant difference in mean diastolic blood pressure of the experimental and control group before after intervention is accepted at 5% level of significance.

TABLE 4.3.2 presents the frequency distribution of quality of sleep

Table 4.3.2 in the experimental group before intervention all the samples 30(100%) had poor quality of sleep. But after intervention from 14th day onwards the number of samples with poor quality of sleep was decreased. At 28th day majority of 27(90%) the samples had good quality of sleep and only 3(10%) had poor quality of sleep.

The table concludes that majority of samples had good quality of sleep on 28th day after intervention which showed that the intervention was effective.

Table 4.3.2 **-**In the control group baseline observation and in subsequent observations all the sample 30(100%) had poor quality of sleep

Table 4.3.3 Presents the mean sleep score of the experimental and control group before and after intervention and significance.

Table 4.3.3 The data suggested that the mean sleep score of experimental group (15.57) was almost equal to the mean of control group (15.80) before intervention . However statistically there was no significant difference between the mean sleep score of experimental and control group before intervention.

After intervention the mean sleep score in the experimental group was reduced from 15.57 to 3.9 where as in the control group the mean sleep score was increased from 15.80 to 18.10. i.e the mean sleep score in experimental group was reduced compared to control group after intervention. Statistically there was a significant difference between the mean sleep score of experimental and control group after intervention.

Therefore Hypothesis H_3 there will be significant difference in mean sleep scores between experimental and control group after intervention is accepted. It indicates the effectiveness of laughter therapy in the experimental group.

Table-4.4.1 Presents the association of demographic variables with three levels of blood pressure before intervention.

Table 4.4.1 There was no association between age, sex , occupation, monthly income, education, exercise habits and regular and time duration of intake of antihypertensive medication with the level of blood pressure before the intervention.

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATION AND RECOMMENDATIONS

This chapter presents the summary of the study, summary of the findings, conclusions and recommendations.

SUMMARY OF THE STUDY

The study was done to assess the effectiveness of laughter therapy on the blood pressure and sleep among hypertensive patients. A quasi experimental pre and post control group design was used. The study was conducted in a selected rural community area in Tirupur. Using a convenient sampling method for 30 samples from one area of the community and 30 samples from the other area of the same community were included in experimental and control groups.

The conceptual framework of this study was based on Johnson E. Dorothy's Behavioral model. Prior to intervention demographic data were collected. Blood pressure was measured using sphygmomanometer and self rated quality of sleep was measured using sleep quality scale for both the groups. The laughter therapy was taught to the clients in the experimental group and they carried out the laughter therapy every day for twenty minutes in the evening for 28 days in the presence of the investigator. Data on blood pressure and on sleep quality was checked on every 7^{th} day, 14^{th}day, 21^{st} day and 28^{th} day for the experimental group and control group. Data analysis and interpretation was done using descriptive and inferential statistics.

SUMMARY OF THE FINDINGS

Demographic data

Majority of the samples in both group (66.7% & 50%) were females. Majority of the samples in both experimental and control group were employed(83.3% &15%) and illiterates (83.3% & 66.6%) belonging to lower economic status having income less than Rs 5000 per month(66.7% &66.7%). Majority of the samples in both group (66.7% & 83.3%) had no habits of exercise. Walking was the only form of exercise for both group (33.3% & 16.7%) and (83.3%) in the experimental group and (86.7%) in the control group took medications regularly (50%) in experimental group and (66.7%) in control group were taking medication for less than two years. All the

samples in experimental and control group were non vegetarians. No samples in both group consumed extra salt in diet.

Assessment of blood pressure on hypertensive patients

Before the intervention in the experimental group majority of the samples 24(80%) were in Stage —II hypertension and remaining 6(20.0%) were in Stage I hypertension. After intervention on 7th day, most of the samples 21(70%) had reduced hypertension from stage II to stage I and the remaining few 9(30%) were still in stage II. From 14th to 28th day the level of hypertension again reduced and finally on 28th day most of the samples 22(73.4%) were in the pre hypertension stage and only 8(26.6%) were in stage I. This table concludes that after intervention a gradual reduction in hypertension was seen from 7th to 28th day which showed that the intervention was effective.

In the experimental group before intervention all the sample (100%) had poor quality of sleep. After the intervention at 28th day all the sample (100%) had good quality of sleep. In the control group baseline observation and also in the subsequent observation majority of the samples (88%) had poor quality of sleep whereas in the control group most of the samples 20(66.6%) were in stage II hypertension and rest 10(33.4%) had stage I hypertension in day 1 which remained almost the same in the 28th day observation.

The self reported quality of the sleep was assessed in two levels

In the experimental group before intervention all the sample (100%) had poor quality of sleep. After the intervention at 28th day all the sample (100%) had good quality of sleep. In the control group baseline observation and also in the subsequent observation majority of the sample (80 %) had poor quality of sleep.

Association of demographic variables.

SIGNIFICANT FINDINGS

- The was significant difference between the mean diastolic blood pressure of experimental and control group after intervention (t=2.00 at d.o.f - 58, p =0.05).

- The was significant difference in mean systolic blood pressure in experimental group before and after intervention (t= 2.04 at d.o.f=28, $p \leq 0.05$).
- There was significant difference between the mean sleep score of experimental and control group after intervention (t= 2.00 dof-58 ,$p \leq 0.05$)
- There was significant difference in mean sleep score of experimental group before and after intervention(t= 2.04 at d.o.f-28 , $p \leq 0.05$).

Conclusion

The findings of the study concluded that there was significant differences found in the mean systolic and diastolic blood pressure and mean sleep score before and after intervention. It is quite clear that laughter therapy is one of the best non pharmacological intervention and supportive therapy that can be used to reduce the blood pressure and promote sleep of patient with hypertension.

IMPLICATION

The finding of the study has implications for nursing education, nursing service, nursing and nursing research.

NURSING EDUCATION

The nursing curriculum should emphasis the students on the preventive measures of major health problems especially over the management of chronic illness. The nursing curriculum should teach the students regarding the preventive measures available in the community to prevent major non communicable problems including hypertension. The nurse educator can provide in service education to the nursing personnel to update their knowledge on the non pharmacological measures like laughter therapy and its valuable benefits to the patients, community and for their personal practice as a means of stress release. The nurse educator can create awareness about the therapeutic benefits of laughter therapy by preparing reference guide which provides information about steps in laughter therapy.

NURSING PRACTICE

Nursing personnel working in the community should arrange for community awareness program like yoga therapy as a part of the preventive measures for hypertension. The study creates awareness among the public and nurses use laughter therapy for personal benefit and for patient with hypertension. Nurses can gain skills in providing holistic care to patient with hypertension using laugher therapy as it reduces the blood pressure and improve the sleep.

NURSING RESEARCH

This study provides scope for future researcher's utilization of finding and applications of knowledge in nursing practice.

RECOMMENDATIONS:

- The study can be replicated for large sample for generalization.
- Maximum publicity should be given through mass media for creating awareness among public about the benefits of laughter therapy.
- This study can be replicated in various setting.
- A similar study can be conducted in other areas of medicine like arthritis, bronchial asthma and diabetes mellitus.

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APPENDIX - 1

PERMISSION LETTER FOR CONDUCTING THE STUDY

R.V.S. COLLEGE OF NURSING

RVS INSTITUTE OF HEALTH SCIENCES

242-B, Trichy Road, Sulur, Coimbatore - 641402.

Ph : 0422-2687421, 2687480, 2687603, Fax : 0422-2687604

www.nursing.rvshs.ac.in

(Affiliated to the TN Dr. M.G.R Medical University, Chennai)

Recognized by the Indian Nursing Council,New Delhi.)

Mrs.Saramma Samuel
Principal

Ref No.

Date. 02-02-2015

BN-5/NSG/2015 - 02

To

The Village President
Kodangipalayam
Tirupur (Dt)

Respected Sir/Madam,

Ms. G.A. Divya is a Post Graduate Nursing student of our College. She has selected the below mentioned topic for her research project to be submitted to Dr. MGR Medical University as a practical fulfillment of Master Nursing Degree.

"A study to assess the effect of laughter therapy on quality of sleep and blood pressure among adult people residing in selected communities at Coimbatore."

Regarding this project, she is in need of your esteemed help and cooperation as she is interested in conducting the study, in the community. I request you to kindly grant her permission for the same and oblige.

The student will furnish further details of the study if required personally.

Thanking You

Permitted

Yours faithfully,

SARAMMA SAMUEL
PRINCIPAL
R V S COLLEGE OF NURSING
242/B, TRICHY ROAD
SULUR, COIMBATORE - 641 402

தலைவர் / செயல் அதிகாரி
கோடங்கிபாளையம் கிராம ஊராட்சி
திருப்பூர் மாவட்டம்

APPENDIX - 2

PERMISSION LETTER OF MEDICAL OFFICER FOR CONDUCTING THE STUDY

R.V.S. COLLEGE OF NURSING
RVS INSTITUTE OF HEALTH SCIENCES
242-B, Trichy Road, Sulur, Coimbatore - 641402.
Ph : 0422-2687421, 2687480, 2687603, Fax : 0422-2687604
www.nursing.rvshs.ac.in
(Affiliated to the TN Dr. M.G.R Medical University, Chennai)
Recognized by the Indian Nursing Council, New Delhi.)

Mrs.Saramma Samuel
Principal

Ref No.

Date 10-02-2015

BN-5/NSG/2015 - 02

To

Dr. Premkumar
Govt. Medical Officer
Public Health centre
Somanur

Respected Sir/Madam,

Ms. G.A. Divya is a Post Graduate Nursing student of our College. She has selected the below mentioned topic for her research project to be submitted to Dr. MGR Medical University as a practical fulfillment of Master Nursing Degree.

"A study to assess the effect of laughter therapy on quality of sleep and blood pressure among adult people residing in selected communities at Coimbatore."

Regarding this project, she is in need of your esteemed help and cooperation as she is interested in conducting the study, in the community. I request you to kindly grant her permission for the same and oblige.

The student will furnish further details of the study if required personally.

Thanking You

Yours faithfully,

SARAMMA SAMUEL
PRINCIPAL
R.V.S. COLLEGE OF NURSING
242/B, TRICHY ROAC,
SULUR, COIMBATORE - 641 402

Permitted
S.D. Prem Kumar

BLOCK MEDICAL OFFICER.
UPGRADED GOVT. PRIMARY HEALTH CENTRE
SOMANUR - 641 008.

APPENDIX – 3

PERMISSION LETTER FOR CONTENT VALIDITY

FROM

G.A.Divya

II Year MSc (N) Student,

Student, R.V.S College of Nursing ,

Sulur, Coimbatore.

T o

Through the Principal

Respected Sir / Madam,

Sub: Request for opinions and suggestions of experts for establishing content validity of research tool.

I am a master of nursing student in RVS College of Nursing,Nulur in the Speciality of Medical and Surgical Nursing. As per the requirement for the partial fulfillment of the master of nursing degree under Tamil Nadu Dr. Mgr Medical University , I have selected the following topic for dissertation.

"A Study to assess the effect of laughter therapy on quality of sleep and blood pressure among adult people residing in selected area at Tirupur district"

I humbly request you to kindly validate the tool and give your valuable suggestions.

Thanking you,

Yours sincerely,

G.A.Divya

Enclosure

1.statement of the problem

2.objectives and hypothesis of the study

3.research tool 4.criteri rating for validation4

APPENDIX— 4

R.V.S. COLLEGE OF NURSING
RVS INSTITUTE OF HEALTH SCIENCES
242-B,Trichy Road, Sulur, Coimbatore - 641 402.
Ph : 0422 - 2687421, 2687480, 2687603, Fax : 0422 - 2687604.
www. nursing.rvshs.ac.in
(Affiliated to the TN Dr. M.G.R. Medical University, Chennai
Recognized by the Indian Nursing Council, New Delhi.)
Mrs. Saramma Samuel
Principal
DINEN ISO 9001 : 2008
CERTIFIED INSTITUTION

10/01/2015

FROM

G.A.Divya
II Year MSc (N) Student,
Student, R.V.S College of Nursing ,
Sulur, Coimbatore.

T o

Through the Principal

Respected Sir / Madam,

Sub: Request for opinions and suggestions of experts for establishing content validity of research tool.

I am a master of nursing student in RVS College of Nursing, Sulur in the Speciality of Medical and Surgical Nursing. As per the requirement for the partial fulfillment of the master of nursing degree under Tamil Nadu Dr. Mgr Medical University , I have selected the following topic for dissertation.

"A Study to assess the effect of laughter therapy on quality of sleep and blood pressure among adult people residing in selected area at tirupur district"

I humbly request you to kindly validate the tool and give your valuable suggestions

8/8/15
SARAMMA SAMUEL
PRINCIPAL
R.V.S. COLLEGE OF NURSING
242/B, TRICHY ROAD,
SULUR, COIMBATORE - 641 402

The Principal,
K.M.C.H. College of Nursing,
P.B. No : 3209, Avanashi Road,
Coimbatore - 641 014.

APPENDIX - 5

CERTIFICATE OF CONTENT VALIDITY

This is to certify that tool developed by Ms.G.A.Divya, MSc Nsg II year student, R.V.S. College of Nursing, Sulur, Coimbatore to collect data on the problem **"A Study to Assess the Effect of Laughter Therapy on Blood Pressure and Sleep among Patients with Hypertension in a Selected area at Tripur**" is validated by the undersigned and she can proceed with this tool to conduct the main study.

Name and Address

Signature

Seal

Date

APPENDIX-6

CRITERIA RATING SCALE FOR VALIDATION

INSTRUCTION

The expert is requested to go through the following criteria for evaluation of the check list. Three columns are given for response and a column for remarks. Kindly place a tick mark in the appropriate column and give remarks.

INTERPRETATION OF THE COLUMNS

COLUMN I -Meets the criteria COLUMN II - Partly meets the Criteria

COLUMN III - Does not meet the criteria.

SI.NO	CRITERIA	I	II	II	REMARKS
1.	**Scoring** - Appropriateness - Adequacy - Accurateness - Clarity - Simplicity				
2.	**Content** -Organisation a. logical sequence b. continuity - Adequate - Appropriateness -Relevance				
3.	**LANGUAGE** - Appropriateness - Clarity - Simplicity - Concise - Precision				
4.	**Practicability** -It is easy to score -Dose it precisely measure the skill -Utility				

Any other suggestions

……

……

Signature:

Designation:

APPENDIX-7

LIST OF EXPERTS

MEDICAL EXPERT

S.D. Prem Kumar
BLOCK MEDICAL OFFICER.
UPGRADED GOVT. PRIMARY HEALTH CENTRE
SOMANUR - 641 008.

1. MR Dr. Premkumar, MD., DIAB.,
Govt. Medical Officer
Public Health centre
Somanur public health center

LAUGHTER THERAPIST:

2.Mr.T.S.MohanRaj M.A., M.P.Ed., M.Phil, P.G.D.Y.E., Ph.D.,
Laughter therapist
YAZH YOGA ZONE ,
Jagannada Nagar
49 Opp to CMC, Avinasi road
Coimbatore-**– 641 014**

NURSING EXPERTS

KMCH COLLEGE OF NURSING
COIMBATORE-641014.

3 . Mr.K. Balasubramaniyan, MSc(N)
Professor,
KMCH College of Nursing,
P.B.No:3209, Avinasi road,
Coimbatore-14

K. Balasubramaniyan

KMCH COLLEGE OF NURSING
COIMBATORE-641014.

4. Mr. P. Kulanthaivel, MSc(N)
Professor,
KMCH College of Nursing,
P.B.No:3209, Avinasi road,
Coimbatore-14

P. Kulanthaivel

APPENDIX – 8

YAZH YOGA ZONE

OPP. CMC- 49, JEGANNATHA NAGAR, AVINASHI ROAD, COIMBATORE – 641 014

EASY METHOD FOR DAILY PRATICE

Date:3.1.2015

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Miss.G.A. Divya** MSc (Nursing) is eligible to provide Laughing Therapy as she has undergone training for Laughing Therapy for one month from 1-12-20014 to 30- 12 2014

Signature

APPENDIX –9

Sub: Editing of the English tool

This is to certify that I have received study content from **Ms. G.A. Divya M.Sc Nursing** student RVS College of Nursing, Sulur. I have make corrections and alteration best my knowledge and skills.

Thanking you

Yours faithfully

APPENDIX -10

SUB: Translation and Editing of Tamil Tool

This is to certify that I have received the tool from **Ms .G.A.Divya M.Sc Nursing** Student of R.V.S College of Nursing , Sulur for Tamil translation and editing. I have made corrections and alterations, best to my knowledge and skill.

Thanking you,

Yours faithfully

வே. கலையரசி எம்.ஏ., எம்.ஃபில். பி.எட்.,
பட்டதாரி ஆசிரியை(தமிழ்)
அரசு உயர்நிலைப்பள்ளி
கல்தான்பேட்டை - 641 669

APPNEDIX – 11

RESEARCH TOOL

INTRODUCTION:

Hypertension is a health problem like any other diseases worldwide. But it is a manageable disease with medication, by taking proper diet and doing proper adequate exercise.

There are different types of activities that a person with a high blood pressure can learn and adapt to keep their blood pressure within the limits.

PURPOSE:

The purpose of this questionnaire is to find the personal information's related to their blood pressure and teach them techniques to reduce blood pressure.

INSTRUCTIONS:

1. Kindly your answer feely and frankly according to the question.
2. Your answers will be kept confidential.

SECTION-I

1. Sample no:
2. Address:
3. Age

a .40 - 50yrs b. 50 -60yrs

4. Sex

a. Male ☐

b. Female ☐

5. Occupation

a. Employed ☐

b. Unemployed ☐

6. Educational status

a. Literate ☐ b. Illiterate ☐

7. Monthly income

a. <5000 ☐

b. Rs. 5000 and above ☐

8. Are you doing exercise daily?

a. yes ☐

b. no ☐

9. If yes what type of exercise you do ?

a. Walking ☐ b. Nil ☐

10. Do you take any hypertensive medications?

a. Yes ☐

b. No ☐

11.How long have you been taking medications?

a. Less than 2 years ☐

b. More than 2 years ☐

12. What kind of food do you prefer?

a. Vegetarian ☐

b. Non vegetarian ☐

13.Do you take extra salt while eating?

a. yes ☐

b. no ☐

APPENDIX - 12

OBSERVATION CHECKLIST

PURPOSE:

T o check the blood pressure.

BLOOD PRESSUSE RECORDING SHEET

SAMPLE NO:

BLOOD PRESSURE	PRE INTERVENTION OBSERVATION ON 1ST DAY	POST INTERVENTION OBSERVATION ON			
		7TH day	14th day	21st day	28th day
SYSTOLIC BLOOD PRESSURE					
DIASTOLIC BLOOD PRESSURE					

APPENDIX - 13

INTRODUCTION:

Sleep is an important biological process in human body which helps to refresh and carry out the physiological and psychological function the next day in as a normal and comfortable routine. Some may experience good sleep and some may not due to certain factors affecting sleep.

PURPOSE:

The purpose of this questionnaire is to find out your quality of sleep during the past weeks.

INSTRUCTIONS:

Kindly give the information's for the questions. There is no right and wrong and all your answers will be kept confidential.

PITTSBURGH SLEEP QUALITY INDEX

1. When do you usually go to bed?

2. How much time would it take for you to fall asleep?

3. When do you usually wake up in the morning?

4. How many hours of sound sleep do you have at night?

		Not during the past weeks(0)	Less than once in a week (1)	Once or twice in a week(2)	Three or more times in a week (3)
5.	a. During the past weeks, how often you could not sleep within 30 minutes?				
	b. Do you wake up in the middle of the weeks to use the toilet?				
	c. you wake up early in the morning?				
	D Do you have breathing difficulty at night or lying position?				
	e. Do you snore and get loud cough while sleeping?				
	f. Do u feel very cold at night?				
	g. Do you have any reason for sleep disturbance at night?				
6	During the past weeks how often have you taken medications to help sleeping?				
7	During the past did you have trouble in staying awake while driving , eating meals or engaging in social activity				
8	During the past weeks how much problem did you face to maintain your enthusiasm to get things done				

APPNENDIX - 14

ஆராய்ச்சி படிவம்

நேர் காணல்

முன்னுரை

உலக அளவில் நான்கில் ஒரு நபர் இரத்த அழுத்தத்தால் பாதிக்கப்படுகிறார்கள். இரத்த அழுத்தம் உள்ளவர்களுக்கு தூக்கமின்மையும் இருப்பதால் மேற்கொண்டு உடல்நலக் குறைபாடுகள் ஏற்படுகிறது. சிரிப்பு பயிர்ச்சி என்பது ஒரு நல்ல கண்டிப்பு தளர்வு முறை மற்றும் இரத்த அழுத்தத்திலும் தூக்கமுறையிலும் நல்ல மாற்றத்தையும் ஏற்படுத்தக் கூடியதாகும் எனவே இப்பயிற்சி அவர்களுக்கு கற்றுத்தர வேண்டிய ஒன்றாகும்.

நோக்கம்

இக்கேள்வித்தாளின் நோக்கமானது, உங்களது இரத்த அழுத்தம் மற்றும் தூங்கும் முறை தொடர்புடைய மக்கள் தொகை தரவை சேகரிப்பதற்கும் அவர்களுக்கு இரத்த அழுத்த குறைவையும் நல்ல தூங்கும் முறையையும் பெற பயிற்சி அளிப்பதாகும்.

குறிப்பு

1. கேட்கப்படும் கேள்விகளுக்கு உண்மையான பதிலளிக்க வேண்டும்.
2. பதில்கள் ரகசியமாக வைக்கப்படும்.

பகுதி-அ

1. மாதிரி எண்:

2. முகவரி:

3. வயது

அ) 40-50 வயது ☐ ஆ) 50-60 வயது ☐

4.பாலினம்

அ) ஆண் ☐ ஆ) பெண் ☐

5. தொழில்

அ) தொழிலாளி ☐ ஆ) வேலையில்லாதவர் ☐

6. கல்வி விவரம்

அ) படித்தவர் ☐ ஆ) படிக்காதவர் ☐

7. மாத வருமானம்

அ) &.5000 áÆÅ ☐ ஆ) & 5,000 க்கு மேல ☐

8. நீங்கள் உடற்பயிற்சியை தொடர்ந்து செய்கிறீர்களா? ஆம் எனில் எவ்விதமான உடற்பயிற்சியை செய்கிறீர்கள்

அ) ஆம் ☐ ஆ)இல்லை ☐

9.இரத்த அழுத்ததை குறைக்க ஏதேனும் மாத்திரைகள் உட்கொள்கிறீர்களா?

அ) ஆம் ☐ ஆ) இல்லை ☐

10.இரத்த அழுத்ததை குறைக்க மாத்திரைகளைத் தொடர்ச்சியாக எடுக்கிறீர்களா?

அ) ஆம் ☐ ஆ) இல்லை ☐

11. எவ்வளவு காலமாக மாத்திரைகளை தொடர்ந்து எடுத்து வருகிறீர்கள்? ☐

அ)இரண்டு வருடங்களுக்கு குறைவாக ஆ) இரண்டு

வருடங்களுக்கு மேலாக

12. நீங்கள் உணவில் அதிகமான உப்பு சேர்த்துக் கொள்கிறீர்களா?

அ) ஆம் ☐ ஆ) இல்லை ☐

13. நீங்கள் எந்த வகையான உணவினை உண்பீர்கள்? அசைவ உணவுகளாக இருப்பின் அதனை எத்தனை முறை எடுத்துக்கொள்வீர்கள்?

அ) சைவம் ☐ ஆ) அசைவம் ☐

14. Çணெ̈ÉâÅ âæÅÇ äã□ ÑÖ áêÉàáëê?

அ) ஆம் ☐ ஆ) இல்லை ☐

பகுதி-ஆ
தரவுப்பட்டியல்

நோக்கம்:

இரத்த அழுத்தத்தை அளவிட

இரத்த அழுத்த படிவத்தாள்:

மாதிரி எண்:

இரத்த அழுத்தம்	சிகிச்சைக்கு முன் முதல் நாள்	சிகிச்சைக்கு பின்			
		7 வது நாள்	14வது நாள்	21வது நாள்	28வது நாள்

மேல் மட்ட இரத்த அழுத்தம் கீழ்மட்ட இரத்த அழுத்தம்					

APPNENDIX – 15

பிரிவு-இ

உறக்க தரப்படடியல்

1. நீங்கள் தினந்தோறும் எப்போழுது உறங்கச் செல்கிறீர்கள்?

வழக்கமான படுக்கும் நேரம்:_____

2.நீங்கள் படுக்கையில் படுத்த பின்பு உறங்குவதற்கு எவ்வளவு நிமிடங்கள் ஆகிறது**?**

நிமிடங்கள் எண்:

3.நீங்கள் காலையில் எத்தனை மணிக்கு எழுகிறீர்கள்?

வழக்கமான எழுந்திருக்கம் நேரம்: _____

4.ஒரு நாளைக்கு இரவில் குறைந்த பட்சம் எவ்வளவு நேரம் உறங்குகிறீர்கள்?

இரவில் தூங்கும் மணி நேரங்கள்: _____

5.	**கடந்த வாரத்தில் இல்லை**	**வாரத்தில் ஒரு முறைக்கு குறைவாக**	**ஒரு வாரத்தில் ஓரிரு முறை**	**ஒரு வாரத்தில் மூன்று தடவைக்கு மேல்**
அ) கடந்த வாரத்தில் எத்தனை முறை 30 நிமிடத்திற்கு மேல் உறங்காமல் அவதிப்பட்டீர்கள்?				
ஆ) நீங்கள் நடு இரவில் அல்லது அதிகாலையில் உறக்கம் கலைந்து அவதிப்பட்டிருக்கிறீர்களா?				
இ) நீங்கள் நடு இரவில் உறக்கத்தில் இருந்து எழுந்து கழிப்பறைக்குச் செல்வீர்களா?				

ஈ) தூக்கத்தின் போது மூச்சு திணறலால் அவதிப்பட்டுகிறீர்களா?				
உ) குறட்டை விடுவதும், இருமுவதும் அதிக சத்தமாக இருக்கிறதா?				
ஊ) நீங்கள் இரவில் மிகவும் குளிராக இருப்பதாக உணர்கிறீர்களா?				
எ) நீங்கள் இரவில் மிகவும் உஷ்ணமாக இருப்பதாக உணர்கிறீர்களா				
ஏ) நீங்கள் இரவில் வலியினால் அவதிப்படுகிறீர்களா?				
ஐ) நீங்கள் இரவில் கெட்ட கனவுகளால் அவதிப்படுகிறீர்களா?				
ஒ) உங்களது உறக்கமின்மைக்கு வேறு ஏதேனும் காரணம் உள்ளதா?				
6.கடந்த மாதத்தில் எவ்வளவு முறை தூக்க மாத்திரையை உபயோகப் படுத்தியிருக்கிறீர்கள்?				
7.கடந்த வாரத்தில் எவ்வளவு முறை தூக்கமின்மையினால் உங்களது அன்றாட செயல்கள் பாதிக்கப்பட்டது?				
8.கடந்த வாரத்தில் எவ்வளவு முறை அன்றாட செயல்களை செய்து முடிப்பதில்				

ஆர்வமின்மை ஏற்பட்டது?				
9.கடந்த வாரத்தில் உங்களது உறக்கத்தினைப் பற்றிய உங்களது கருத்து என்ன?				

APPNENDIX - 16

LESSON PLAN

Name of the teacher		
Topic	:	Laughter Therapy
Duration	:	30 Minutes
No of Person	:	30
Date		
Time		
Method of Teaching	:	Lecture Cum Demonstration
Central objective	:	At the end of the teaching the client with hypertension will be able to perform laughter therapy.
Specific objective	:	The client's are able to

- Explain the laughter therapy
- Tell the purpose of laughter therapy
- Perform laughter therapy

Time	Specific objective	Content	Teacher/learner activity
5 minutes 5 minutes	Introduction Client is able to explain the laughter therapy	**Introduction** Good evening. How are you? Laughter is a natural medicine It makes you feel happy and promote overall health and Lecture cum discussion wellness. Today we are going to learn about laughter therapy that will help to reduce blood pressure and induce sleep. **Topic: Laughter therapy** **Definition:** The laughter therapy is an excellent type of exercise which control blood pressure by Lecture method reduce the release of stress related hormone and bringing relaxation.	Lecture cum discussion Lecture method

5 minutes	Tell the purpose of laughter therapy	Purpose of laughter therapy • Laughter is a good exercise • It promotes overall health and wellbeing. • It reduces anxiety, tension an depression • This enhance the blood flow. • It helps to control the blood pressure. • It increases the level of immunity power. • It brings relaxation • It helps to control pain and release muscle tension • It promote sleep	Lecture method
15 minutes	Perform laughter therapy	**Laughter therapy** **Steps** 1. In the first step, one laughs freely and loudly on one group, Explain with open mouth each steps, 2. In the second step, one laughs without any Redemonstrate, Group sound with closed mouth, practice, Teacher 3. In the third step, one pours out loud bursts of laughter through the throat like neighing of horse	Demonstrate the technique of on five clients on one group, explain each step, redemonstrate, group practice, Teacher instructs, corrects and reinforce supervisor

3 minutes 2 minutes		All three steps are performed by 5 times. While performing these exercises one raises the hands up, brings down and bends the body at the waist according to one's ability. 4. After the laughing exercise is completed, the teacher instructs the clients to do cooling down process. In the cooling down process, one takes deep breaths and gradually raises arms and gradually exhale the breathe. **Conclusion** So we learned what is laughter therapy and its purpose and how to practice laughter therapy. **Follow up** Carry out laughter therapy for 28 days/20 minutes in the community at 4 pm to 4.30 pm	What are the benefits ? What are the steps of laughter therapy ? How do you feel after performing laughter therapy ? Explain the importance of laughter therapy for next 28 days.

APPNENDIX - 17

கற்பிக்கும் பாடத்திட்டம்

தலைப்பு	:	சிரிப்புபயிற்சி
காலம்	:	30 நிமிடங்கள்
பங்குபெறுபவர்களின் எண்ணிக்கை	:	30
பாடம் நடத்தும் முறை	:	செய்முறை, கலந்தாய்வு, வினா மற்றும் விடைகள்

பொதுவான குறிக்கோள்:

பாடத்தின் முடிவில் சிரிப்பு பயிற்சியை பற்றிய அறிவாற்றலும் அதன் செயல்முறையும் நன்றாக தெரிந்திருக்க வேண்டும்.

குறிப்பிட்ட குறிக்கோள்:

- சிரிப்புபயிற்சி பற்றிய விளக்கம்
- சிரிப்பு பயிற்சிகள் நன்மைகள்.
- சிரிப்பு பயிற்சி செய்யும் முறை

வ. எண்	நேரம்	குறிப்பிட்ட குறிக்கோள்	பொருளடக்கம்	கற்பித்தல் மற்றும் கற்றல் முறை	ஒளிஒலி சாதனங்கள்
1	5 நிமிடம்	முன்னுரை	**முன்னுரை** மாலை வணக்கம். எப்படி இருக்கிறீர்கள்? சிரிப்பு என்பது ஒரு இயற்கை மருத்துவம். இது உங்கள் மகிழ்வாகவும் மற்றும் உடல் நலத்தை மேம்படுத்தவும் உதவும். இன்றைக்கும் நாம் பழகப்போகும் சிரிப்பு பயிற்சி இரத்த அழுத்தத்தை குறைக்க உதவியாகவும், நிம்மதியா உறங்கவும் உதவி செய்யும்.	**சுலந்தாய்வு**	
2	5 நிமிடம்	**சிரிப்பு பயிற்சி பற்றி விவரமாக தெரிந்து கொள்ளுதல்**	**தலைப்பு** **வரையறை:** சிரிப்பு பயிற்சி என்பது ஒரு வகையான சிறந்த உடற்பயிற்சி. இவை மன அழுத்தத்தை		

			குறைப்பதுடன் இரத்த அழுத்தத்தை சீராக வைக்க உதவுகிறது.		
3	**5 நிமிடம்**	சிரிப்பு பயிற்சியின் பொருள் என்னவென்று கூறுதல்	**பொருள்:** ✚ சிறந்த உடற்பயிற்சி ✚ உடல்நலத்தையும்இ மன நலத்தையும் சீராக பேணிகாக்க உதவுகிறது. ✚ முன எரிச்சல், மன அழுத்தத்தை குறைக்கிறது. ✚ இரத்த ஓட்டத்தை அதிகப்படுத்தும். ✚ இரத்த அழுத்தத்தை சீராக வைக்க உதவுகிறது ✚ நோய் எதிர்பு சக்தியை அதிகப்படுத்துகிறது ✚ மன அமைதியை தருகிறது. ✚ உடல் வலியை குறைக்கிறது ✚ உறக்கத்தை அதிகப்படுத்துகிறது		
4.	15 நிமிடம்	**சிரிப்பு பயிற்சியை செய்து காட்டுதல்**	**சிரிப்பு பயிற்சி படிகள்:** ❖ நன்றாக வாயை திறந்து சத்தமாக சிரிக்கவும். ❖ வாயை திறக்காமல் சத்தமில்லாமல் சிரிக்க	இந்த பயிற்சியை ஐந்து நபர்களை கொண்ட ஒரு குழுவாக செய்து	

			வேண்டும். ❖ குதிரை கனைக்கிற மாதிரி சத்தமாக சிரிக்கவும். இவை அனைத்தையும் ஐந்து முறை செய்யவும். இந்த பயிற்சி செய்கிற போது கைகளை மேலே தூக்கி உடம்பை நன்றாக முன்நோக்கி வளைந்து சிரிக்கவும். ❖ சிரிப்பு பயிற்சிக்கு பிறகு நிதான நிலைக்கு வர வேண்டும். நிதான நிவை என்பது ஆழ்ந்த மூச்சு எடுத்து மெதுவாக கைகளை உயர்த்தி பின் மெதுவாக மூச்சுக்காற்றை வெளியே விடவும்.	காண்பிக்க வேண்டும். அவற்றை மறுபடியும் செய்து காட்ட வேண்டும்.	
5	**3 நிமிடம்**		**முடிவுரை** இதுவரை நாம் சிரிப்பு பயிற்சி பற்றி பார்த்தோம் மற்றும் அதை எவ்வாவு என்பதைப் பற்றியும் தெரிந்து கொண்டோம்	சிரிப்பு பயிற்சியின் பயன்கள் யாவை? இப்பொழுது உற்கள் உடல்நிலை எவ்வாறு உள்ளது.	
6	**2 நிமிடம்**		**கடைபிடிக்க வேண்டியது.**	இந்த சிரிப்பு பயிற்கியினை 28	

			இந்த பாடப் பயிற்சியை 30 நாட்களுக்கு தலா 15 நிமிடங்கள் மதலை 5 மணி முதல் 5.30 மணி வரை செய்ய வேண்டும்.	நாட்கள் செய்த பிறகு பயன் என்ன வென்று விசாரிக்கவும்	

APPENDIX – 18

REPORT FOR SELF ANALYSIS TO RULE OUT PLAGIARISM USING THE SOFTWARE PLAGIARISM DETECTOR

Plagiarism detector- Originality report

Plagiarism detector project: [http://plagiarism-detector.com]

Application core version 885

Originality report details

Generation time and date	:	15-09-2015 15: 30:35
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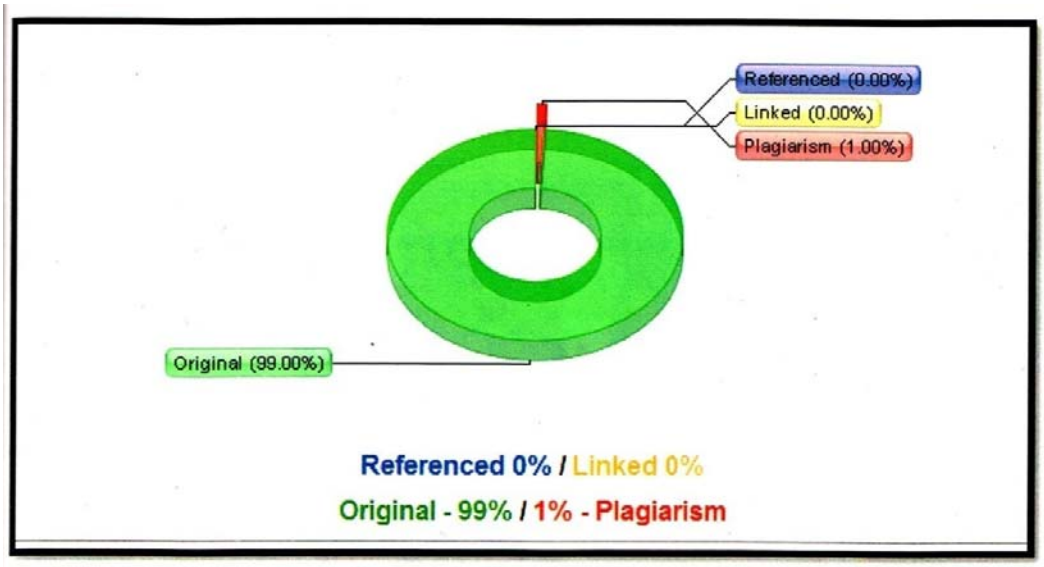

Step -1 Laughs freely and loudly with open mouth

Step -1 Laughs freely and loudly with open mouth

Step -2 Laughs without any sound with closed mouth

Step -3 Laughs though the throat like neighing of horse